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Cooperative Grain Trade Opportunities in Eastern Europe

Abstract

COOPERATIVE GRAIN TRADE OPPORTUNITIES IN EASTERN EUROPE,
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Opportunities for U.S. cooperatives to trade grains, oilseeds, and products with Czechoslovakia, the German Democratic Republic (GDR), Hungary, and Poland are evaluated and marketing alternatives discussed. U.S. agricultural exports to these four countries totaled $497 million in 1982, representing 2.4 percent of total U.S. agricultural exports. Poland was the largest customer, followed by GDR, Czechoslovakia, and Hungary.

Despite increased efforts toward self-sufficiency in grain and oilseed production, Eastern European countries are expected to remain substantial net importers in the 1980's. Net imports of the four countries are projected to reach 6.3 million tons of feedgrains, 2.8 million tons of wheat, and 3.8 million tons of oilseed products in 1985. By 1990, net imports are projected to increase slightly to 6.4 million tons of oilseeds and products.

Imports in these countries are arranged through Foreign Trade Organizations (FTO's). Doing business with these state-owned monopolies requires special marketing skills and considerations. The FTO's prefer to deal with suppliers that can provide desired commodities, quantities, qualitites, and related services and can assure performance according to agreed terms. FTO's tend to buy from the lowest bidder. Buyers preferred to deal with European-based sellers to facilitate communications and other relationships.

To date, counter trade requests tied to grains and oilseeds imports are infrequent. Increasing hard currency balance of payments problems may increase the frequency of such requests. Credit terms are essential in making sales to some countries. Recent repayment difficulties, however, suggest caution in extending credit.

Key Words: Cooperative exports, grain exports, international trade, Eastern Europe, countertrade.

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Preface

This study is part of a research effort to help U.S. farmer cooperatives improve and strengthen their capabilities in international trade. The objective is to identify and analyze potential markets and marketing strategies cooperatives might pursue to penetrate selected Eastern European markets for grains, oilseeds, and products. These commodities represent more than 80 percent of the value of U.S. agricultural exports to Eastern Europe and often are marketed through similar facilities and by the same firms. Much of the information generated for grains and oilseeds applies to other commodities.

Countries of primary interest in this study are Poland, German Democratic Republic (G.D.R.), Hungary, and Czechoslovakia. Neighboring countries will be discussed to the extent they influence trade and economic relations of these countries. All four countries are major importers of oilseeds and oilseed meals and, except for Hungary, are significant net importers of grains. They have the highest living standards in the region, with G.D.R. on top, followed by Czechoslovakia, Hungary, and Poland.

The study proceeded in three phases, beginning with assembling background material on production, consumption, trade, and trade policies from secondary sources. Phase two involved interviews in Washington with appropriate embassy officials, followed by extensive overseas interviews with key agencies involved in foreign trade and domestic marketing. Overseas fieldwork took place in September 1979. Phase three involved projecting import needs for grains and oilseed meals to 1985 and 1990 and developing marketing strategies U.S. cooperatives may use to take advantage of trade opportunities.

Many people contributed data and made suggestions to improve this study. The authors sincerely appreciate their assistance.

The authors especially appreciate the contribution of many officials in the importing countries. Officials in the ministries of agriculture and food, foreign trade, and finance, and those in foreign trade organizations and end-using enterprises contributed much time and information to the study. Other officials from state planning organizations, universities, state and cooperative farms, and embassies in the United States were most helpful.

Many people in the U.S. Department of Agriculture provided information and offered suggestions and advice. Much of the data used in the analysis was furnished by the Foreign Agricultural Service and the Economic Research Service. Also, many officials in these agencies consulted with the authors over various portions of this study. Agricultural attachés and U.S. embassy officials in the countries visited were most helpful in advising and consulting with the authors during in-country visits. They also provided statistical data and other information unavailable elsewhere.

Officials of the U.S Department of Commerce also provided data on trade trends and prospects and consulted with the authors.

Several cooperative leaders reviewed study plans and offered helpful suggestions.

Finally, the authors appreciate the support extended by the Agricultural Cooperative Service, University of Illinois, and University of Idaho.

Contents

Highlights

U.S. agricultural exports to Eastern Europe in 1982 were $877 million, half of 1981 exports and about one-third of 1980 exports. The four countries included in this study, Poland, German Democratic Republic (G.D.R), Hungary, and Czechoslovakia, imported $497 in agricultural products from the United States in 1982.

These four Eastern European countries provide a modest market for U.S. farm products, taking 2.4 percent of total U.S. farm exports in 1982, down from 5.6 percent in 1980. Poland is usually the largest U.S. customer in Eastern Europe, with G.D.R. ranking second and Czechoslovakia fifth.

Grains, soybean meal, soybeans, cattle hides, and cotton make up the bulk of U.S. agricultural exports to Eastern Europe. Poland, G.D.R., and Czechoslovakia account for most of the region's imports. Until 1981, the United States was the largest shipper of feed grains to the region, and a major supplier of wheat.

Feed grains, particularly corn, are the leading U.S. exports to Poland, G.D.R., and Czechoslovakia. All three, plus Romania, are major markets for U.S. soybean meal, with Poland the main market for soybeans. In 1980-82, Eastern Europe took 17 percent of U.S. oilseed cake and meal (down to 8 percent in 1982), 9 percent of feed grain (6 percent in 1982), 3 percent of wheat (1 percent in 1982), and 3 percent of soybeans exports (2 percent in 1982).

U.S. farm products covered nearly a sixth of Eastern Europe's total import needs in 1980-81, with the proportion varying, 51 percent for all grains, 33 percent for oilseed meal, 69 percent for feed grains, and 74 percent for oilseeds.

U.S. imports from Eastern Europe are mainly nonagricultural. In 1981, farm products constituted 17 percent of the value of total U.S. imports from this area.

Eastern European countries accumulated huge trade deficits with their trade partners outside the area. Combined net hard-currency indebtedness of Eastern European countries by the end of 1982 stood at $75 billion. Poland is the region's biggest debtor nation.

U.S. agricultural exports to Poland, primarily feed grains, wheat, soybean meal, soybeans, and soybean oil, were valued at $182 million in 1982, down considerably from the high of $669 million in 1979.

U.S. agricultural exports to G.D.R., primarily feedgrains, wheat, and oilseed meal, amounted to $237 million in 1982, down from a high of $559 million in 1980.

Czechoslovakia provides a small and highly volatile market for U.S. exports. In 1982, U.S. agricultural exports were valued at $90 million, consisting primarily of corn, some oilseed-meal, and small quantities of wheat.

Next to Bulgaria, Hungary is the United States smallest Eastern European trade partner. In 1981, U.S. agricultural exports were $7 million, while imports were $33 million. Soybean meal is the most important U.S. export. Hungary occasionally buys corn to make up production shortfalls.

The economic systems of the four Eastern European countries are interrelated within the Committee on Mutual Economic Cooperation (COMECON). The objective of COMECON is creating an integrated economic bloc. Whenever available, Czechoslovakia, G.D.R., and Poland import grain from Hungary, U.S.S.R., and Romania.

The foreign trade system of COMECON countries is considerably different from those in market-economy countries. Foreign trade is carried out by foreign trade organizations, which are state monopolies. The national economic plan specifies the kinds and quantities of commodities to be imported or exported.

Import needs are estimated by various ministries and are sent to the Party Presidium for approval. When approved, foreign trade organizations are directed to secure imports.

Plans for 1981-85 stress increasing agricultural production, particularly grain and fodder; improving productivity; and modernizing the food industry. Consumption of food and livestock products is to be restrained by raising prices. Consumption still is subsidized, however, and demand for meat will outpace production in most countries.

Indications are Eastern European countries will not become self-sufficient in grains or meet their protein-feed needs in the 1980's. Import requirements are projected as follows:

	Feed grains		Wheat		Oilseed meal	
	1985	1990	1985	1990	1985	1990
			1,000 Metric tons			
Czechoslovakia	800	700	480	480	844	910
G.D.R.	2,250	2,400	650	650	1,300	1,500
Hungary	−80	−230	−850	−1,000	630	800
Poland	3,300	3,500	2,500	2,500	1,040	1,200
Total	6,270	6,370	2,780	2,630	3,814	4,410

(Minus signs indicate exportable surpluses.)

G.D.R., Poland, and Czechoslovakia are expected to rely on a smaller volume of grain imports than in the 1970's.

Despite increased efforts toward self-sufficiency in grain production, Czechoslovakia is expected to remain a substantial net importer in the 1980's. In livestock production, the current plan gives priority to beef over pork production. A significant expansion in poultry production also is anticipated. Support is being given to developing food-processing, meat, and dairy-product-processing industries.

Production of grains and feedstuffs in G.D.R. is to be increased to reduce annual grain imports by a million tons below current levels. Based on past performance, this goal may not be achieved, and net grain imports are projected to amount to about 2.9 million tons by 1985 and 3.1 million tons by 1990. Corn will remain the principal feed grain import.

Future imports of feed grains will be affected by size of the potato crop, and by the extent to which production of pelleted straw for feed is increased. G.D.R. needs annually about 1.8 million tons of milling-quality wheat and 700,000 tons of milling rye to meet food requirements. Future import requirements, though reduced from past levels, will continue to include hard wheat to upgrade the milling quality of domestic wheat.

Hog and cattle inventories may expand little, but broiler production is likely to increase. G.D.R. is expected to remain a substantial importer of protein meals.

Hungary is 80 to 90 percent self-sufficient in foodstuffs, and plans to step up agricultural exports and cut down on imports. It is hoped wheat and corn exports can be increased from their 1980 levels of 814,000 and 83,000 tons, respectively.

Despite plans for increased production, Hungary's oilseed-meal import requirements are not expected to decline from present levels, and, more likely, will show a moderate rise.

U.S. agricultural exports to Hungary are not expected to grow much above current levels, given the country's new self-sufficiency in foodstuffs. Soybean meals will continue to remain the leading U.S. farm export.

Polish planners would like to reduce grain imports in the 1980's to 4 million to 5 million tons per year, consisting of wheat, corn, and barley, and to keep oilseed-meal imports about 0.9 million tons. These targets appeared extremely ambitious in light of actual production patterns in recent years. However, lack of foreign exchange and credit and declining livestock numbers, especially poultry, reduced 1981 grain imports to 4.7 million tons and estimated 1983 imports to 3.4 million tons. If economic sanctions by western nations are lifted and if credit arrangements can be established, grain imports are expected to reach 6 million tons annually in the 1980's. Poland's oilseed-meal imports would then be projected to reach 1.04 million tons in 1985 and 1.2 million tons in 1990. In view of past production patterns, individual-year imports will vary considerably around projected levels.

Assuming U.S. share of Poland's grain imports in the future approximates those in the 1975-79 period, U.S. wheat exports may fall in the 300,000- to 750,000-ton range and corn exports in the 1.9 million- to 2.2 million-ton range. On the same basis, U.S. oilseed-meal exports could amount to 480,000 to 650,000 tons.

U.S. exports will, to an important degree, be affected by availability of Commodity Credit Corporation (CCC) financing, willingness to enter into a new grain-trade understanding providing for annual supply of specific volumes of grain, and willingness to engage in countertrade deals.

Import foreign trade organizations (FTO's) prefer to deal with suppliers that can provide desired quantity and quality of needed commodities with related services and assure performance according to agreed terms. In most cases, U.S. cooperatives were not well recognized by Eastern European buyers.

Eastern European buyers strongly preferred dealing with sellers based in Europe. They indicated this allows for daily or more frequent contact with grain suppliers and facilitates developing personal acquaintances with sellers.

Foreign trade organizations tend to buy from the lowest bidders, other things being equal. Further considerations, such as willingness of one seller to offer better nonprice terms, could result in a purchase from other than low bidders. These considerations include willingness to accept the Eastern European country's goods in a countertrade arrangement, reputation for superior quality and reliability, or better credit terms.

Counterpurchase is a form of countertrade that might be relevant to agricultural export organizations. It requires the Western exporter to purchase Eastern goods equal to a specified percentage of the value of sales. Countertrade arrangements, however, pose difficulties for the seller, because they may require acceptance of inferior-quality products that may have to be sold at a discount and face restrictions in entering the United States or other Western markets.

A number of U.S. farm supply cooperatives have indicated willingness to import and market commodities acquired in countertrade deals. Potential total value placed on these imports exceeded $1.4 billion in 1978. Some important commodity groups included in these imports are petroleum products; tires,

batteries, and accessories; fertilizer and farm chemicals; building materials; hardware; general farm supplies; and animal health supplies.

While countertrade has not been a prerequisite to doing business with Eastern European countries in grain and oilseeds, willingness and ability to accommodate such arrangements might present a powerful marketing strategy to gain market access.

Joint ventures are another means of promoting trade between U.S. cooperatives and Eastern European organizations. Such undertakings involve sharing management, ownership of capital investments, profits, and risks. Areas with potential for joint ventures are feed milling; dairy, poultry, and cattle feedlot operation; and food processing. Goods produced by plants established as joint ventures in an Eastern European country commonly are marketed through a jointly owned trading company set up in a Western country.

Eastern European countries look favorably on technical-assistance projects, probably because of favorable results gained from such projects carried out by the cooperator programs of USDA's Foreign Agricultural Service.

Technical-assistance programs by themselves do not automatically assure sales by cooperatives. Sale offers have to be competitive, because foreign trade organizations are autonomous in their decisionmaking on when, where, from whom, and at what price to buy grains and oilseeds.

Cooperative Grain Trade Opportunities In Eastern Europe

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OVERVIEW

Importance of Eastern Europe in World Grain and Oilseed Trade

Eastern Europe occupies an important position in the world grain economy. In recent years, it has accounted for 8 percent of world production and 9 percent of utilization. The region's importance in feed grains is greater than in wheat. Eastern Europe has been a large and growing net importer of grain, oilseeds, and oilseed meals during the past decade.

In 1981, grain imports totaled 15.9 million tons and exports, 3.8 million tons, leaving an import balance of 12.1 million tons. These trade flows represented 7 percent of world imports and 2 percent of world exports, respectively. Until 1973-74, grain imports consisted mainly of wheat, but since then, feed grains, especially corn, have had a larger share of total imports. In 1981, wheat imports amounted to 6.0 million tons, and feed grains imports were 9.9 million tons. The region's share of world imports was 6 percent in wheat and 9 percent in feed grains.

Eastern Europe plays a minor role in the grain export trade. In 1981, grain exports comprised 1.9 million tons of wheat and 1.8 million tons of feed grains. Importance of wheat and feed grains has alternated over time. Hungary, Romania, and Bulgaria are exporters of wheat, while Romania, Hungary, and Yugoslavia are exporters of corn. Exports of grain by other countries in the region are negligible. The major Eastern Europe wheat exporters compete actively on the world market. Buyers of their grain are primarily northern importing countries of Eastern Europe.

Sunflower seed is Eastern Europe's chief oilseed crop. Production has expanded moderately in the 1970's, entirely due to increased area sown in Hungary. The region is an important producer, accounting for 16 percent of world sunflower seed output in recent years. Rapeseed is Eastern Europe's second-ranking oilseed crop, contributing 10 percent to world output. Soybeans are the third-ranking oilseed crop in the region. Despite significant expansion in production in Romania and Bulgaria in the past decade, output falls far short of requirements. Soybean meal is the preferred source of protein in livestock rations, and Eastern Europe has been importing growing amounts of it since 1972.[1] A fifth to a fourth of world soybean-meal exports went to Eastern Europe in the second half of the 1970's.

Institutional Framework

The economic systems of Eastern European countries are modeled after that of U.S.S.R. and are interrelated within an organization called the Committee on Mutual Economic Cooperation (COMECON).[2] This organization was formally launched in April 1949 as a counterpart to the Marshall plan. COMECON is designed to promote economic integration of participating countries. More specifically, it aims at accelerating economic development and achieving a more rational international division of labor among members countries. Related objectives are speeding up economic growth of less industrialized member countries, aligning economic development levels, increasing labor productivity, and improving living standards.

COMECON is composed of Bulgaria, Cuba, Czechoslovakia, German Democratic Republic, Hungary, Mongolia, Poland, Romania, U.S.S.R., and Vietnam. Albania, an original member, was excluded after the Soviet-Albanian split in 1961. Yugoslavia has had associate membership status since 1964. Afghanistan, Angola, Cambodia, Ethiopia, Mozambique, North Korea, and South Yeman have been granted observer status. COMECON cooperates with Finland, Iraq, and Mexico through special agreements made in 1973-76.

To achieve their objectives, member countries:

- Promote increased trade among themselves;
- Engage in economic, scientific, and technological cooperation;
- Specialize in producing certain industrial goods; and

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[1] By 1981, soybean meal's share of total oilseed meal fed reached 70 percent. This share has likely declined in 1982 and 1983 due to reduced imports of protein meals, primarily soybean meal. U.S. Department of Agriculture, Economic and Statistics Service, *Agricultural Situation: Eastern Europe, Review of 1980 and Outlook for 1981* (Washington, DC, April 1981) p. 4.

[2] COMECON also is referred to as the Council for Mutual Economic Assistance (CEMA).

• Undertake joint development programs in industry, energy, agriculture, and transportation.[3] Attempts to develop a COMECON-wide, 5-year coordinated plan have so far not succeeded. Nonmember countries also can conclude special agreements with COMECON countries.

In each country, the Communist Party's control over direction of economic development is paramount. Major factors of production are owned collectively, and a hierarchial system of economic organization operates under an administrative command chain. This means central authorities set national targets for production, consumption, distribution, and trade and use policy instruments such as contracts, procurement prices, subsidies, taxes, and credits to achieve them.

Administrative decisions, not market forces, determine level and composition of output, allocation of resources, and distribution of income. Control over prices is exercised through regulating prices of material inputs and supervising wage expenditures. Consequently, prices in this economic system do not reflect relative cost of input and demand for output. Prices perform only a limited allocative function in bringing supply in balance with demand.

Country Overviews

Czechoslovakia

Geography—Czechoslovakia is a central European country with an area of 49,371 square miles, slightly larger than that of New York State (fig. 1).

Czechoslovakia has three principal regions, Bohemia, Moravia, and Slovakia. Bohemia is a plateau surrounded by mountains occupying the western part of the country. It is economically and politically the most important region. Moravia includes the central part of the country and has a hillier landscape than Bohemia. It has important coal and steel industries in the North. Slovakia makes up the eastern part of the country and has mountains in the northern and central part and lowlands with fertile soils in the South.

The 1983 population was 15.4 million, with 10.5 million in Czech lands and 4.9 million in Slovakia. Population is growing at an annual rate of 0.03 percent. Besides Czechs and Slovaks, several other ethnic groups live in each region. Slovakia has Hungarians, Gypsies, and Ukranians; Moravia and Bohemia have Germans; and Poles live in northern Moravia close to the border. Main cities are Prague, with a population of 1.19 million; Bruno, 372,800; Bratislava, 374,900; Ostrava, 325,500; and Plzen, 168,500.

Czechoslovakia has a temperate climate, a blend of the maritime climate of Western Europe and the continental climate of the East. Spring and fall are pleasant, while summer tends to be cool, with mean July temperatures of 68 degrees F. Winter is usually mild and damp, with mean temperatures of 28 degrees F.

History—The Czechs lost their national independence in 1620, and for the next 300 years, became part of the Austro-Hungarian monarchy. The country regained its independence at the end of World War I, and together with Slovakia, formed the new Czechoslovak Republic and functioned as a parliamentary democracy until 1938.

The country was under political strain through most of the interwar years, created by minority pressures, particularly by the large German element. Under the September 1938 Munich agreement, it was forced to give up the German-inhabited Sudetenland to Germany. The Munich agreement also sanctioned transfer of parts of Slovakia heavily populated by Hungarians and the Ruthenia region to Hungary. Germany moved into Czechoslovakia in March 1939 and established a German "protectorate" over Bohemia and Moravia. Slovakia nominally became an independent republic but was actually a German satellite.

Czechoslovakia was liberated by American and Soviet armies in 1944-45. Liberation brought significant changes in its wake, affecting the country's territory, population structure, and economic and political systems. Czechoslovakia lost 4,900 square miles of Ruthenia south of the Carpathian mountains to U.S.S.R. As a gesture of revenge in 1945-46, Czechoslovakia expelled about 2.1 million ethnic Germans and some Hungarians from Slovakia.

At war's end, parliamentary democracy was reestablished and a coalition government formed, including the Communist Party. Although in 1946 elections the Communist Party won only 38 percent of the vote, it gradually neutralized the non-Communist forces. The party assumed power in February 1948, making Czechoslovakia the last among the Eastern European countries to come under Communist rule. Communist control meant adopting a Soviet-type economic system, establishing a planned economy, collectivizing agriculture, and nationalizing industry and commerce.

The primary aim of Stalinist development in Czechoslovakia, as in other Eastern European countries, was establishing an industrial base in the 1950-55 period. Although this development was successful, inattention to agricultural

[3]Description of intra-COMECON trade and economic relations and related organizations is given in Appendix 1.

Figure 1

Map and Basic Statistics for the Czechoslovak Socialist Republic

Capital	**Prague**
Population (1983)	15.4 million
Growth rate	0.3 percent per year
Rural pop.	33 percent
Area (1980)	49,370 sq. miles
Agricultural	54 percent
Arable	40 percent
Forested	35 percent
Cropland	41 percent
Arable land ownership (1980)	
State farms	31 percent
Collectives	63 percent
Labor force (1980)	**7.6 million**
Agriculture labor	1.1 million
State farms	18 percent
Collectives	75 percent
Other	7 percent

Gross National Product (1981)	U.S. $137.2 billion
Per capita	U.S. $8,970
Imports (1982)	U.S. $16.2 billion
Exports (1982)	U.S. $16.2 billion
Agriculture's share of: (1980)	
National income	8 percent
Labor force	14 percent
Imports	14 percent
Exports	4 percent
Official exchange rate: (1983)	
Commercial	5.35 crowns = U.S. $1

Ports: Uses ports in Yugoslavia, Poland, FRG, and GDR
Currency: Korona or crown = 100 haler
Natural resources: coal/coke, lignite, magnesite, timber, uranium

development resulted in serious food deficits. In the post-Stalin period, there was a downturn in economic performance. Pressures for reform led to a change in leadership headed by Dubcek. Reform programs introduced by Dubcek in April 1968 represented a drastic break from traditional Communist economic and political systems.

Concerned with spread of the Czech liberalizaton experiment, Warsaw Pact forces invaded Czechoslovakia in August 1968 and forced the leadership to retract Dubcek's reforms. Apparently, the Soviets felt Czech efforts to de-Stalinize and democratize the politico-economic system were threatening the Communist Party's leading role. This concern with party primacy was used to justify proclaiming the Brezhnev doctrine of limited national sovereignty. It affirmed the Soviet Union's right to intervene in the affairs of a Communist country when proposed changes threaten the Party and the State, regardless of whether the local Communist Party requests it.

In October 1969, Dubcek was ousted from the Communist Party leadership and his supporters removed from positions of power. The new government under Huzak's leadership eliminated market-oriented reforms and gradually restored the traditional central planning and management system.

Government—The present constitution was adopted in 1960. The country is a Socialist state, with power vested in the working people and exercised through their elected representative in the National Assembly. In 1969, Czechoslovakia became a federal republic composed of the Czech Socialist Republic (Bohemia and Moravia) and the Slovak Socialist Republic (Slovakia). Separate national Czech and Slovak governments are in charge of regional economic affairs and one federal government in Prague is responsible for overall coordination of both region's political and economic systems.

The executive branch of government consists of the President who is the chief of state, the Premier, serving as the head of government, and the Cabinet. The President, with the approval of the Federal Assembly, appoints the Cabinet, including the Prime Minister. The legislative branch is the bicameral Federal Assembly, comprising the Chamber of the People and the Chamber of the Nations. The Chamber of the People has 200 deputies elected by districts based on population. The Chamber of the Nation has 150 deputies, half of whom are elected by the Czech National Council and the other half by the Slovak National Council.

A list of candidates for election to the Chamber of the People is nominated by the "National Front," a coalition made up of political parties and mass organizations. The National Front is controlled by the Communist Party. Members of the Chamber of Nations are designated by the National Councils. Passing legislation requires the consent of both chambers.

In principle, the bicameral Federal Assembly is the supreme organ of state authority. In practice, however, the Communist Party, through control over selection of candidates for election to the Federal Assembly, is the real power behind formulation and passage of legislative programs.

At the regional level, the legislative bodies are the Czech and Slovak National Councils.

Economy—Czechoslovakia's natural resources are coal (brown and hard), iron ore, timber, copper, magnesite, antimony, and uranium. By the end of World War II, Czechoslovakia already was industralized by European standards and relatively spared from damage during the war. This gave her, in the early post-war period, a considerable production and economic advantage over her Eastern European COMECON partners. For example, in the late 1940's, only Czechoslovakia was able to produce motor vehicles in substantial numbers.

Nationalization of basic industry and foreign, wholesale, and retail trade was completed in 1950-51. At the outset, the Communist government, conforming to the Soviet pattern, stressed heavy industry rather than consumer goods, transportation systems, housing, and agriculture. Production of capital goods registered high growth rates during the 1950's, but waste, inefficient use of resources, and low labor productivity prompted a review of industrial organization and planning techniques. Decentralization measures introduced during 1963-67 were only partially implemented and proved ineffectual in correcting inefficiencies. More radical reforms launched under Dubcek's leadership were cut short by the Warsaw Pact invasion in 1968.

Restoring economic normalcy and control became the chief determinant of economic policy after 1968. Industrial production expanded in the post-invasion period, but quality and technical performance of many products did not match that of their Western counterparts. Aging industrial plants was a factor. New industrial plants in petrochemicals and machine building were needed, especially when producing for Western markets. To revitalize and restructure its industry, Czechoslovakia continues to emphasize imports of Western technology and equipment and cooperation agreements. Czechoslovakia has a high level of industrialization, with about two-thirds of the gross national product (GNP) coming from industry. Of a total labor force of about 7.55 million, some 36 percent is employed by industry. The most important industries are engineering and metalworking (heavy industry), chemicals, textiles, glass, beer brewing, wood, paper products, china, and ceramics.

Living standards generally are recognized as on the same level or slightly below those in the German Democratic Republic, which has the highest level.

Agriculture—Czechoslovakia has the most diverse topography in Eastern Europe, which has contributed to development of a highly diversified agriculture. The nation's soil and climate are suitable for cultivating a wide range of crops.

Land reform was carried out in two stages, the first in 1945 and the second in 1947-48. The Land Reform Act of 1945 expropriated about 7 million acres from German and Hungarian citizens of Czechoslovakia and from those who collaborated with the Nazis. Land Reform Laws of 1947-48 limited the size of individual holdings and placed any undistributed land and larger land holdings under "national administration." Collectivization of Czechoslovak farms began in 1949 and was completed by the early 1960's[4] Agriculture occupies a relatively minor position in the national economy, having contributed 10.5 percent to national income in 1980.[5] The agricultural labor force was 1.08 million in 1980, 14.3 percent of the total.

Agricultural lands total 6.9 million hectares and account for 54.4 percent of the total land area, while forests account for 35.2 percent.

Of agricultural lands, 5.2 million hectares, about 40 percent, are arable. The potential of Czechoslovakian agriculture is limited by the area of agricultural land, 0.45 hectare per capita. In terms of acreage, the main crops are sugar beets, wheat, potatoes, barley, oats, rye, and corn. Livestock products contribute about 58 percent to total value of production. The leading livestock enterprises are hog and cattle production. Agriculture is reasonably well mechanized, and the per-hectare fertilizer application rate was the highest in Eastern Europe in 1980.

Foreign Trade—Czechoslovakia's foreign trade is dominated by capital goods, which represented 50.2 percent of total exports and 36.6 percent of total imports in 1980. The main export categories are machinery, motor vehicles, iron and steel, and chemicals. Leading imports in capital goods are machinery and equipment. A resource-deficient country, Czechoslovakia depends heavily on fuels and raw materials, which made up 48.7 percent of total imports in 1980, the largest import category. The main trading partners are fellow socialist countries, accounting for about two-thirds of Czechoslovakia's total foreign trade. More than half this trade is with U.S.S.R., Czechoslovakia's major raw-material supplier.

German Democratic Republic

Geography—G.D.R. is in central Europe, and covers an area of 41,757 square miles, about the size of Tennessee (fig. 2). Within the borders of G.D.R. is West Berlin, a city with special political status.

G.D.R. has three major regions—northern; central; and southern, south of the Elbe River. About two-thirds of the country is part of the Northern European Plain extending eastward into Poland. The northern region has lakes and low hills adjoining the Baltic Sea. Soils are mainly heavy clay types, with rye and oats the main crops. The central part contains the mountainous Harz, fertile sections along the Elbe River, and valleys with stretches of sand and gravel. Rye is the dominant crop of this section. The southern region contains the uplands, notably the Thuringian Forest, the Saxonian Middlelands, and the Erzgebirge; and the Leipzig basin. Wheat is the main crop of the southern region.

The major rivers are the Elbe; the Oder; and its principal tributary, the Western Neisse, which forms the eastern border, running from Czechoslovakia to the Baltic Sea. G.D.R. has two main ports on the Baltic Sea, Rostock and Wismar.

Major cities are East Berlin, with a population of 1,133,400; Leipzig, 563,900; Dresden, 516,300; Karl Marx-Stadt, 316,937; Magdeburg, 288,725; and Halle, 232,700.

G.D.R. has a cold northern European climate with ample rain and a relatively short growing season. Average daily maximum temperature is 70°F to 75°F in the summer. In winter, the average daily minimum temperature is 20°F to 30°F.

G.D.R. had a population of 16.7 million in 1983 which is either stationary or declining. G.D.R. officials say the decline was halted in 1979.[6] As a result of the decline, the economy has been hampered by a labor shortage, particularly of skilled workers. This has been a major factor behind the drive for agricultural mechanization and industrial modernization.

History—After the surrender of Germany in May 1945, the area now comprising the G.D.R. became part of the Russian occupation zone. At the Potsdam conference in August 1945, 39,000 square miles of German lands were placed under

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[4] An elaboration of the organization of agricultural production and marketing in Czechoslovakia is given in Appendix 2.

[5] In Czechoslovakia, as in other COMECON countries, net material product (NMP) is used instead of GNP in national accounts statistics. It is defined as the net value added in the production of material goods and services directly needed to bring goods to market. NMP differs from GNP by exclusion of capital consumption allowances and value of services not related to production of goods.

[6] The Economist Intelligence Unit Ltd., *Quarterly Economic Review of Poland, East Germany, Annual Supplement 1980* (London, 1980), p. 19.

Figure 2

Map and Basic Statistics for the German Democratic Republic

Capital	Berlin (East
Population (1983)	16.7 million
Growth rate	0 percent
Rural pop.	24 percent
Area (1980)	41,814 sq. miles
Agricultural	58 percent
Arable	44 percent
Forested	28 percent
Cropland	46 percent
Arable land ownership (1980)	
State farms	7 percent
Collectives	87 percent

Labor force (1980)	9.0 million
Agriculture labor	0.8 million
State farms	31 percent
Collectives	68 percent
Other	1 percent
Gross National Product (1981)	U.S. $162.9 billion
Per capita	U.S. $9,750
Imports (1981)	U.S. $20.3 billion
Exports (1981)	U.S. $20.0 billion
Agriculture's share of: (1980)	
National Income	9 percent
Labor force	9 percent
Imports	13 percent
Exports	3 percent

Ports: 4 major—Rostock, Wismar, Stralsund, Sassnitz
Currency: Mark = 100 pfennig
Official exchange rate: Pegged 1 to 1 to West German mark.
Natural resources: brown coal lignite, potash, iron ore, uranium.

Polish administration and additional areas in former East Prussia were assigned to Soviet administration. With Soviet encouragement, the Communist Party and Social Democratic Party merged in 1946, forming a new party, the Socialist Unity Party.

October 1946 elections resulted in coalition governments in the five states and at the national level, with the Socialist Party emerging as the dominant force. The new regime with Soviet backing started nationalizing large-scale industry, trade, and finance; breaking up large agricultural holdings; and imposing central planning. All these measures essentially were completed by 1948.

The first constitution was adopted on October 7, 1949, providing for a bicameral parliament, with the People's Chamber, or lower house, and the States Chamber, or upper house. Four days later, the G.D.R. was proclaimed and a government formed. Apart from U.S.S.R. and its Eastern European allies, however, the non-Communist countries did not recognize G.D.R. until 1972-73.

Economic difficulties and tightening of the country's control over wages immediately after Stalin's death triggered large-scale worker protests in June 1953 in East Berlin, which rapidly spread to other parts of the country. The protests, however, were suppressed with Soviet help, and the government imposed stricter internal security controls. G.D.R. signed a peace treaty with U.S.S.R in 1955 and became a full member of the Warsaw Pact in 1956. The campaign for socialization also was revived in the mid-1950's and reached full swing in 1958. In 1958-59, more than half of private enterprises converted into semistate business organizations.

In November 1972, West Germany and G.D.R. concluded a treaty on basic relations, recognizing the postwar borders of the two German states and affirming each other's internal and external sovereignty. The United States and G.D.R. established diplomatic relations in 1974.

The present G.D.R. constitution was adopted in 1974. It declares "the German Democratic Republic is a socialist state and the citizens exercise political power through democratically elected representatives." It futher adds the G.D.R. is "forever and irrevocably allied" with the Soviet Union. Relations between the two countries are specified in various treaties. The latest is a Friendship and Cooperation Pact concluded in 1976, linking them even more closely than preceding ones.

Government—In 1952, the traditional 5-state form of governmental and administrative organization was replaced with 14 districts, each consisting of 15 to 16 counties. This reorganization was designed to strengthen central control and conformed to the Soviet pattern. The executive branch consists of two bodies, the Council of State and the Council of Ministers. The Council of State is a presidential committee composed of 24 members, and its chairman is head of state. In general, since 1974, the council performs mainly ceremonial functions. To the extent its chairman also is the general secretary of the Socialist Unity Party, the council's power may be greater than prescribed in the constitution. The Council of Ministers serves as a cabinet and its chairman, as the head of government. The council is made up of the heads of various ministries in charge of governmental administration.

When the State Chamber was abolished in 1958, the legislative branch became a unicameral parliament called the People's Chamber. Its 500 members are elected every 5 years. The People's Chamber elects both the State Council and members of the Council of Ministers.

The legislative and executive branches of government do not have much power in carrying out their constitutional responsibilities. The Socialist Unity Party and its leadership are the most important decisionmakers in all matters of national concern and scope. Economic policies and programs are formulated primarily within the party apparatus and submitted for formal approval to the People's Chamber.

Besides the Socialist Unity Party, there are four other parties. The Christian Democratic Union, the Liberal Democratic Party, the National Democratic Party, and the Democratic Farmers' Party. All have a rather small membership and cooperate fully with the leading party. Political parties, together with mass organizations (youth, trade union, women's, and culture), cooperate in the National Front. The Communist-dominated National Front determines the makeup of the parliament or People's Chamber. It selects and nominates the candidates for the electorate.

Economy—G.D.R. is poorly endowed with natural resources, having only brown coal (lignite), potash, uranium, and iron ore in sizable supplies. The territory that is now G.D.R. and Poland suffered the greatest war-related damage and destruction in Eastern Europe. Slowing industrial recovery were the dismantling and carrying off of complete factories, industrial goods, rail and rolling stock, and livestock to U.S.S.R. in 1945-47. Estimates indicate about half the prewar industrial fixed capital may have been lost due to dismantling and removal. G.D.R. was required to make reparations in goods and services until the mid-1950's.

G.D.R.'s recovery from wartime dislocations also was delayed by her isolation from outside markets and loss of imports from West Germany, which U.S.S.R. could not begin to replace, and by the changeover to Soviet-style insititutions and centrally planned economic system. In 1948, industrial

production still was less than half the 1939 level.[7] The first basis for recovery was laid in 1948-49, with founding of G.D.R. However, it took the country 10 years of work to bring its economy back to the 1939 level. Until well into the 1950's, Soviet advisors and managers of heavy industry were the dominant influence over the economy.

Since the mid-1950's, economic policy and organization have contributed substantially to the lag in East German efficiency and growth. The lag in East German manufacturing output has been a main factor holding back the country's economy.

Wide differences in living standards between the two Germany's and political and economic controls in the East prompted a large number of East Germans to flee to the West. To stop the drain on the work force, G.D.R. restricted movement between the eastern and western sectors of Berlin in 1961.

Lagging economic performance in the second half of the 1950's provided a stimulus for reform. The reforms introduced in 1963-65 under the New Economic System called for organizational decentralization, reduction of subsidies, setting of profits in relation to performance, and a flexible price system. Price reform was to encourage more rational calculation of costs and revenues and more economical use of scarce and imported raw materials, which had been priced too low.

As it turned out, not all features of reform measures proposed were put into effect and allowed to operate without administrative interference. Some measures were introduced only on an experimental basis, others were postponed or modified, and still others never passed the discussion stage. The reforms were discarded by the end of the 1960's, when it became apparent they were ineffective in revitalizing the economy. The 1970's witnessed the return to traditional centralized control over the economy. The rate of economic expansion was slowed in the 1976-80 period by the high cost of imported raw materials and energy and constraints imposed by labor shortages.

Today, G.D.R. is industrially the most advanced Communist Bloc country, with per-capita GNP of $9,750 in 1981. Changes in the economy include a growing share for industry, a declining share for agriculture, and a nearly constant share for services. Manufacturing is the main economic sector, contributing 62 percent to net national income and employing 38 percent of the labor force in 1980. Mechanical and automative engineering is the principal industrial branch, with a share of more than 24 percent in manufacturing output. The food-processing industry has a 16.5-percent share and the chemical industry, a 15-percent share.

Heavily dependent on external sources of fuel and raw materials, G.D.R. is giving priority to modernization and expansion of plant and equipment to increase efficiency in resource use and improve labor productivity. Part of the drive for improving efficiency is reorganization of industrial enterprises into vertically integrated combines. Plans for developing the economy stress metallurgical, machine-building, electronics, and electrical industries and the fuel and energy sector. Considerable progress has been made toward integration of G.D.R.'s industries with those of U.S.S.R.

Agriculture—Land reform was initiated in September 1945 under direction of the Soviet Military Administration. All farms larger than 100 hectares were distributed, and those held by active Nazis and war criminals were taken over without compensation and distributed. Some 3.3 million hectares of land were affected by land reform, of which 2.3 million hectares were given to landless peasants, farm workers, resettlers from territories Germany lost in the war, and small holders to increase the size of their original holdings. About a million hectares were used to create state farms.

A significant segment of private agriculture survived until the late 1950's, because the regime could not afford the risks of reduced food production and drop in efficiency that collectivization could bring about. The first agricultural production collectives established in 1952 absorbed most of the peasants who had been given small holdings from the estates divided in land reform. The old, established peasantry with two-thirds of the agricultural land resisted the pressures of collectivization until the late 1950's. Under the threat of collectivization, the independent peasentry produced food below potential levels, requiring the regime to import food to reach prewar consumption levels.

The collectivization drive intensified in 1958-59, and many farmers joined collectives in which they could keep their own livestock and equipment. Collectivization was completed by the end of 1961.

G.D.R.'s agricultural land is about 6.3 million hectares, representing 58 percent of the total land area. Of this, arable land accounts for about 4.8 million hectares, or 44 percent of the total. With a populationof 16.7 million in 1980, there is 0.37 hectare of farmland per inhabitant, one of the lower ratios among Eastern European countries.

In 1980, agriculture and forestry contributed only 9.1 percent to net national income, the lowest among the European members of COMECON. Some 850,000 persons were

[7]Edwin M. Snell and Marilyn Harper, "Postwar Economic Growth in East Germany: A Comparison with West Germany." *Economic Developments in Countries of Eastern Europe*, (Washington, D.C.: Joint Economic Committee, Congress of the United States, 1970), p. 561.

employed in agriculture, representing 9.4 percent of total employment in 1980.

G.D.R. has an intensive agriculture with widespread application of modern methods, all-around mechanization, and continued investment in soil improvement. The aim is to raise productivity while decreasing labor requirements. In 1981, it had the highest rate of fertilizer application per hectare of arable land among COMECON countries. Production units increasingly are specialized in particular branches of crop or animal production.[8]

Special emphasis is given to fodder production, a key to increased livestock production. Some 70 percent of total crop production is devoted to feeding. The main agricultural products are grains, potatoes, sugar beets, meat, and dairy products. Despite her intensive agriculture, G.D.R. has not been able to meet fully the demands of the domestic market and has to rely on imports of oilseed meals and grains.

Foreign Trade—Because foreign trade accounted for 27 percent in GNP in 1980, it is crucial to G.D.R.'s ability to support and develop her industrialized economy.

Some 56 percent of imports are primary products, including fuels, metals, and foodstuffs. The second largest import category is composed of mechanical engineering products and industrial plants, representing a third of total imports in 1980.

Machinery, equipment, and means of transport account for more than 51 percent of total exports. Next in importance are industrial consumer goods, followed by chemicals, rubber, and building materials. Trade between West Germany and G.D.R. is of great benefit to G.D.R. as a market for basic and intermediate materials and capital goods.

Agricultural products are small contributors to G.D.R.'s foreign trade. In 1980, agricultural products supplied only 3 percent of all exports and represented 13.4 percent of all imports.

G.D.R.'s major trading partners are other COMECON countries, which account for about two-thirds of total volume, half of which is with U.S.S.R.

Terms of trade between G.D.R. and West Germany originally were set in the 1951 Berlin Agreement. With West Germany's entry into the European Economic Community (EEC), trade with G.D.R. was classified as "intra-German" and therefore exempt from tariffs and levies placed on trade with other non-EEC countries. In addition, G.D.R. is benefiting from interest-free swing credit granted by West Germany to finance part of the trade between the two countries. In 1982, such interest-free credits totaled 850 million Deutschmarks ($354 million) and covered about 13 percent of G.D.R.'s imports from West Germany.

[8]Discussion of G.D.R.'s agricultural production and marketing organization is given in Appendix 2.

Hungary

Geography—Hungary is a central European country in the Carpathian Basin with an area of 35,900 square miles, about the size of Indiana (fig. 3).

The great Hungarian Plain occupies nearly half of Hungary's surface. In addition to lowlands, Hungary has two other geographical areas, the Transdanubian region west of the Danube and the mountainous area in the central and northern parts of the country. The Transdanubian region has a varied landscape of hills, mountains, and intervening valleys suitable for mixed farming and growing fruits, vegetables, and grapevines. The northern region with low mountains ranges also has a rolling landscape where production is essentially the same as in the Transdanubian region.

In 1981, Hungary had an estimated population of 10.7 million, growing at an average rate of less than 0.5 percent since 1960. The early 1980's had experienced a decline of about 0.1 percent per year. Hungary has only two small ethnic minorities, Germans and Slovaks, which make up about 3 percent of the population.

Main cities are Budapest, with a population of 2,080,000; Miskolc, 210,000; and Debrecen, 195,000.

Hungary has a temperate climate conditioned by continental influences from the east, with moderating effects from the Western European Oceanic and the Southern and Eastern European Subtropical Zones. The climate is well balanced with seasons of almost equal length. January temperatures average 31°F and July 71°F. Annual precipitation averages 26.2 inches and often is distributed unevenly.

History—Hungarians settled the territory now forming their country in 895-96 A.D., and on converting to Christianity, established a monarchy that lasted nearly 1,000 years. The Turks occupied a third of the country including its capital city in 1526 and achieved a decisive victory over the Hungarian army. In 1686, Hungarian and Austrian troops aided by foreign auxiliaries recovered occupied territories from the Turks. As compensation for his aid, the Austrian emperor demanded and received the right of succession for his family. Hungary became a member of the Austro-Hungarian monarchy until its dissolution at the end of World War I.

Figure 3

Map and Basic Statistics for the Hungarian People's Republic

Capital	Budapest
Population (1983)	10.7 million
Growth rate	– 0.1 percent
Rural pop.	50 percent
Area (1980)	35,900 sq. miles
Agricultural	72 percent
Arable	55 percent
Forested	17 percent
Cropland	59 percent
Arable land ownership (1980)	
State farms	15 percent
Collectives	78 percent
Labor force (1980)	5.2 million
Agriculture labor	1.0 million
State farms	19 percent
Collectives	81 percent

Gross national product (1981)	U.S. $63.7 billion
Per capita	U.S. $5.950
Imports (1983)	U.S. $8.9 billion
Exports (1983)	U.S. $8.9 billion
Agriculture's share of: (1980)	
National income	14 percent
Labor force	19 percent
Imports	12 percent
Exports	24 percent

Ports: Uses ports in Poland, GDR, and Romania.
Currency: florint = 100 filler
Official exchange rate: Arbitrary
Floating rate set daily. November 1981 rate approximately Ft. 39 = U.S. $1.
Natural resources: Bauxite, brown coal

Separated from Austria after World War II, Hungary lost the greater part of her historical territory to neighboring countries, Czechslovakia, Romania, and Yugoslavia, under terms of the peace treaty of 1920. The country came briefly under Communist rule in 1919 in the wake of discontent resulting from economic dislocations of the lost war and breakup of the monarchy.

Hungary entered and fought in World War II as a German ally, but the Horthy regime was ousted in October 1944 and replaced by a pro-German dictatorship. The country was liberated by Soviet armies in April 1945, and a peace treaty was signed with the Allied Powers in 1947. The first post-World War II elections in October 1945 led to establishment of a republic and a coalition government under the leadership of the majority Smallholders Party. The coalition government, lasted about 2 years, and in mid-1947 the Communist Party, with backing of the U.S.S.R. established a Communist government. A Soviet-style constitution was adopted in 1949, proclaiming Hungary a People's Republic.

Attempts to maintain Stalinism in Hungary after its denunciation in the Soviet Union led to criticism of the government and its policies in 1956. The fall of the Stalinist government in Poland encouraged a challenge to the Stalinist system in Hungary. Street fighting erupted in Budapest in October 1956. The upheaval resulted in a drastic shakeup of party leadership and government. On November 1, 1956, the new government headed by Nagy proclaimed Hungary's neutrality; her leaving the Warsaw Pact alliance; and her intention to hold free, multiparty elections. The U.S.S.R disapproved of such radical changes, and Soviet forces stopped the rebellion. The new party leadership under Kadar's direction installed a relatively mild reformist government that sought to upgrade the standard of living of the Hungarian people and abolished a number of repressive measures in education and cultural activities.

Government—The highest organ of state authority is the parliament, known as the Hungarian National Assembly, a unicameral body of 352 members elected for 4-year terms. Nomination of candidates for election to the National Assembly, as well as to local bodies, is made by the Patriotic People's Front. This organization is dominated by the Communist Party and includes representatives of mass organizations.

The National Assembly elects from among its members a Presidential Council serving as a collective head of state and consisting of a President, 2 Vice Presidents, a Secretary, and 17 Members. The President of the Presidential Council performs the Council's public functions and acts as its spokesman. The Presidential Council selects the Council of Ministers, subject to National Assembly confirmation, which performs the executive-administrative functions of the government. The Council of Ministers consists of a Premier, 5 Deputy Premiers, and 21 Members.

The Council of Ministers directs the work of the ministries and organs directly subordinate to the Council. Seventeen ministers are organized partly on the principle of the branch of economic activity they direct and partly according to the function they perform. Supplementing government activities are various special commissions.

Actually, the Council of Ministers has little power and primarily executes party policies and instructions. The National Assembly routinely approves legislation formulated by the Hungarian Socialist Workers' Party (Communist), the only legal party. Party membership is estimated at slightly more than 700,000.

The nation has 19 counties, each of which is governed by People's Councils appointed by the national government.

Economy—Since World War II, Hungary has been transformed from an agrarian into an industrial country with modern agriculture. In 1950, more than 50 percent of the total labor force was employed in agriculture, compared with only 19.3 percent in 1980. Equally far reaching were concurrent changes in the ownership pattern of means of production. Today, the principal means of production are socialistically owned either by state enterprises or collectives.

New incentives for private-sector activities have been provided since 1980. These include credit facilities for private craftsmen and traders, discounts on wholesale prices, and leasing of state-owned shops and restaurants to private individuals on a contractural basis. The number of private shops and restaurants rose by 2,054 during 1981.

In the post-Stalin period, economic performance deteriorated, providing a strong stimulus to reform. To promote growth, a comprehensive reform program was introduced on January 1, 1968, known as the New Economic Mechanism (NEM). While retaining socialist ownership of the means of production and the planning mechanism, reforms provided for greater play of market forces and use of indirect fiscal tools for guiding production decisions. Enterprises, within certain limits, were allowed to decide what and how much to produce and the sale price of goods. Moreover, they were free to hire and dismiss labor, change the wage rate, and distribute part of the profit to employees.

Decentralization with more competition is the chief strategy of the present reform drive. However, so far, little progress has been made toward introducing competitive price formation in agriculture. Under the 1980-81 price reform, the rules for competitive pricing were applied in only 15-20 percent of processed foods. Producer prices of major agricultural

commodities are determined on the basis of production costs, with adjustments made according to world market price relationships. The price mechanism thus blurs the true economic losses or gains from export of food and agricultural products.

Overall, economic reforms under the New Economic Mechanism corrected many inefficiencies in the Hungarian economy and brought material improvement in the standard of living. National income increased an average of 6.5 percent yearly between 1970 and 1975, and 3.2 percent between 1976 and 1980. The per-capital gross national product reached $5,950 in 1981.

Industry is the key sector of economic development and growth and, together with the building industry, produces more than 60 percent of Hungary's national income. Manufacturing industries make up about 62 percent of total industrial output. The most important sector of Hungarian industry is engineering, supplying 26 percent of total Hungarian commodity exports in 1980. The food-processing industry is an important segment of the industrial sector, accounting for 19 percent of industrial production, 12 percent of industrial employment, and 13 percent of capital stock.

Agriculture—Land redistribution was one of the earlier policy measures taken by the post-World War II government. Some large estates were expropriated by the state and transformed into state farms. The bulk of the land, however, was redistributed into 2- to 3-hectare holdings. These newly created farms were not only too small for efficient operation but were handicapped further by shortages of production inputs. As a result, production declined, causing food supply difficulties in urban areas. Collectivization was regarded as the most expedient way for enlarging farm sizes and improving productivity. The collectivization drive began in 1949 and was concluded in 1960. Agriculture is now almost completely (94 percent) socialized, comprised of collectives (64 percent), other state organizations (19 percent), and state farms (11 percent).

Seventy-two percent of the national territory was cultivated in recent years, one of the higher proportions in the world. Hungary has varied climate and soils, allowing growth of a wide variety of crops. Vagaries of weather also call for a varied crop structure, as the weather makes success of growing various crops depend on seasonal changes.

Agriculture is an important producing, supplying, and exporting sector of the Hungarian economy. Agricultural production in the 1970's increased at an annual rate of 3.2 percent. Growth of agricultural production was accompanied by a gradual shift in the output structure. The notable feature of this process has been growth of the livestock sector and its more balanced development than that of crop production. The livestock sector represents about 48 percent of gross agricultural production and has been stable since 1976. The key branches in agriculture are grains (corn and wheat), protein fodder, feed processing, sugar beets, animal breeding, meat production, vegetables, and fruit.

Agriculture's share of GNP in 1980 was 14.3 percent, accounting for 18.5 percent of all fixed assets and 20 percent of the productive work force. Thus, agriculture is still a major employer of labor. Its contribution to the economy also is underscored by the fact farm products provided 24 percent of total exports and only 12 percent of total imports in 1980. Agricultural exports also benefit the economy by improving the balance of payments. Hungary has a surplus in agricultural trade.[9]

Foreign Trade—Foreign trade plays a key role in the Hungarian economy, because the country depends heavily on imported raw materials for its industry and agriculture. Hungary's main natural resources are bauxite, coal, and natural gas, and the nation needs to import most other industrial raw materials.

The chief export items are machinery and tools and industrial and consumer goods, while machinery and raw materials make up the bulk of imports. Socialist countries are the main trading partners, accounting for 52 percent of Hungary's exports and 48 percent of imports. About half of Hungary's trade with COMECON countries is with Russia.

The importance of foreign trade to Hungary's economy is illustrated by the relationship between imports and national income. More than a third of the 1980 GNP depended on foreign trade. Furthermore, on average, a 1-percent increase in Hungarian national income required a 1.3- to 1.5-percent increase in imports from the West.[10] A significant part of agricultural production goes into export markets.

In 1980, about 36 percent of all foodstuffs produced was exported. Specifically, 12 to 20 percent of Hungrian cereal output, about 43 percent of poultry volume, and almost half of beef output are being exported. Some 30-40 percent of horticultural products are exported annually. The structure of Hungarian agricultural and food exports has shifted since 1970 toward processed products with high value added, while reducing imports of these products. Thus, share of processed products rose from 57 percent to 64 percent of Hungry's

[9]Description of the organization of agricultural production and marketing in Hungary is presented in Appendix 2.

[10]B. Csikos-Nagy, "The New Path of Hungarian Price Policy," (Unpublished paper, 1979), page 3.

agricultural exports and diminished from 67 percent to 60 percent of its agricultural imports.

To promote further growth of agricultural and food exports, Hungary has stepped up investments for modernizing and enlarging the food-processing industry, in particular, modernizing slaughterhouses, meat-processing plants, vegetable-oil factories, canning factories, cold stores, and wine bottling plants.

Hungary plans to align domestic producer price structure with world market prices by the mid-1980's. Such alignment would be particularly important due to the nation's heavy dependence on foreign trade. The difference between domestic and world market prices is being eliminated through price support schemes and differential taxes.

Poland

Geography—Poland is the largest Eastern European member of COMECON, with an area of 120,664 square miles, about the size of New Mexico (fig. 4). As a result of the Potsdam Conference in 1945, Poland's post-World War II frontiers were redrawn extensively and its borders were shifted westward by 125 miles. Thus Poland gained 39,000 square miles of former German territory and lost 69,000 square miles to U.S.S.R. in the east. Part of the area acquired from Germany included Silesia, which contained damaged though important industrial establishments.

Agreements between the Polish and Soviet governments also resulted in exchange of millions of people. All ethnic Poles and Jews in the areas ceded to Russia could opt for Polish citizenship and be transferred to Poland; likewise, all ethnic Russians, Ukranians, and Lithuanians within the new Polish borders could ask to be transferred to U.S.S.R. Agreements at Potsdam also sanctioned transfer of the German minority out of Poland. As a result of population transfers, Poland had the most drastic reduction in minority population of any Eastern European country. Ethnic minorities have been eliminated almost completely, and the present population is almost entirely Polish.

Poland is in the same general latitude as southern Canada. Most of the country lies in a flat plain that is part of the Central European plain extending to the Ural Mountains. The climate is typical for the Northern European Temperate Zone. Annual rainfall varies from 20 inches in the lowlands to 48 inches in the mountains. Poland, however, has a relatively short growing season restricting the range of crops produced. The northern part of the country has a growing season of 180 days and the southern part, 200 days. The hottest month is July, with temperatures in the range of 59°F to 75°F. The coldest month is January, with a temperature range of 20°F to 32°F. Poland is subject to frequent droughts.

Soils in Poland are usually less fertile than those in other Eastern European countries and require good cultivation methods and intensive fertilization to obtain comparable yields. Sixty percent of agricultural lands are light, sandy soils, best suited for crops, such as rye, oats, barley, potatoes, rapeseed, sugar beets, various leguminous fodder crops, and certain kinds of vegetables and berry plants.

The major rivers are the Oder; its tributary, the Western Neisse, which forms the western border with G.D.R., and the Vistula. Poland has two major ports, Gdansk and Szczecin, both on the Baltic Sea.

Main cities are Warsaw with population of 1,572,000; Lodz, 832,400; Krakow, 706,900; Wroclaw, 609,400; Poznan, 545,600; and Gdansk, 449,200. Poland's population was estimated to be 36.6 million in 1983 and had increased by an average of 0.9 percent a year since 1970.

History—Poland's history was interspersed with periods of famine and upheavals culminating in a partition by Prussia, Russia, and Austria in 1795. Independence for Poland came after World War I and lasted until 1939, when the nation came under German and Soviet occupation. During the war, Poland had a government in exile in London, which until 1944 was the sole representative of Polish interests and coordinator of Polish participation in the Allied war effort. In July 1944, U.S.S.R. installed a rival committee, the Polish Committee of National Liberation, which the Soviets recognized as the Polish Government in January 1945. After the Yalta Conference, a Polish Provisional Government of National Unity was formed in June 1945, recognized by the United States.

According to the wartime Yalta and Potsdam agreements, Poland was to remain within the Soviet sphere of influence, and after a 3-year transition period, Communist rule was established in 1948. Later, a Soviet-type system of planning and management was adopted and a 6-Year Plan was introduced in 1950. Poland's constitution was promulgated in 1952 and amended in 1976.

Dissatisfaction with the slow de-Stalinization process and food shortages led to workers' protests in October 1956, ending in a change in government. The new government, under Gomulka, partially decentralized the planning system, permitting decollectivization and development of a more permissive environment. As Gomulka gained strength, he dampened the de-Stalinization trend, so measures implementing Polish reform went only halfway.[11]

[11]John M. Montias, "Producer Prices in a Centrally Planned Economy—The Polish Discussion," in Gregory Grossman (ed.), *Value and Plan* (Berkeley: University of California, 1960), pp. 47-75.

Figure 4

Map and basic statistics for the Polish People's Republic

Capital	Warsaw
Population (1983)	36.7 million
Growth rate	0.9 percent
Rural pop.	45 percent
Area (1980)	120,664 sq. miles
Agricultural	61 percent
Arable	47 percent
Forested	28 percent
Cropland	48 percent
Arable land ownership (1980)	
Private farms	68 percent
State farms	18 percent
Collectives	4 percent
Other	10 percent

Labor force (1980)	19.6 million
Agriculture labor	5.9 million
Private farms	83 percent
State farms	14 percent
Collectives	3 percent
Gross national product (1981)	U.S. $178.0 billion
Per capita	U.S. $4,960
Imports (1982)	U.S. $10.3 billion
Exports (1982)	U.S. $11.3 billion
Agriculture's share of: (1980)	
National Income	15 percent
Labor force	30 percent
Imports	16 percent
Exports	7 percent

Ports, major: Gdansk, Gdynia, Szczecin, Swinoujscie
Currency: zloty
Official exchange rate: 84 zlotys = U.S. $1
Natural resources: coal, sulfur, copper, natural gas

With deterioration in economic performance came new protests by students in 1968 and confrontation in December 1970 between workers and the government over the rise in prices of essential consumer goods. This led to a new government headed by Gierek. The government acquiesced in the workers' demand of price freezes and substantial wage increases and introduced a series of measures designed to improve the standard of living and to speed up economic growth. However by 1976, economic conditions worsened, aggravated by shortfalls in agricultural production.

Riots broke out, sparked by sudden sharp increases in food prices on June 24, 1976, forcing the authorities to revoke them the next day to avert a major political crisis. The government took steps to increase food supplies, but also disciplined workers involved in the riots. A workers' defense committee was formed to help free arrested workers and reinstate those dismissed because of the riots. This committee became a nucleus for a wider movement of dissidents in Poland.

Strikes in summer 1980 resulted in overthrow of the Gierek party leadership and dismissal of inefficient government officials. The new Party leadership headed by Kania and a reconstituted government with General Jaruzelski as Prime Minister introduced various measures to revive the economy and restore calm in labor-government relations. The strikes forced the government in August 1980 to recognize the right of workers to have a trade union independent of the government and Communist Party control. Accords paved the way for government registration of Solidarity, the first independent workers' trade union in the Soviet Bloc. Subsequently Rural Solidarity was established as the autonomous organization of private farmers. Liberalization started to take place. A possibility for economic reform and changes in economic policy was created, although in the short run, the economic situation deteriorated further.

Under pressure of demands by Solidarity and public opinion in general, the government prepared a proposal for economic reform. The resulting new policies did not stabilize the economy, and the downward movement continued in 1981. A drastic fall in agricultural production caused by adverse weather conditions in 1980 had an additional negative impact. At the same time, the government and Party leadership were undergoing several changes.

Party leaders concerned with the deepening economic crisis were also concerned with limiting the power of Solidarity. In the beginning of 1981, only about 60 percent of productive capacity was utiilized in industry.

Gradually escalating political confrontations and economic deterioration occurred in 1981. The relative positions of Party and Solidarity hardened despite mediation efforts by the Church. The Government was unable to take austerity measures needed for economic stabilization. To cope with the worsening crisis, General Jaruzelski replaced Kania as Party Secretary in October 1981. A major government reorganization then brought in three non-Party members as cabinet ministers. Attempts at reaching a national accord were terminated abruptly on December 12, 1981, with declaration of a state of emergency, placing Poland under martial law. Concurrently, numerous restrictive measures were introduced, including suspension and eventual dismanteling of Solidarity and Rural Solidarity.

In response to the suspension the United States revoked most favored nation trade status with Poland in October 1982. In 1982-83 there was a gradual relaxation of some restrictions introduced under martial law. The situation at the time of writing is still far from normal and when political stability will be established is still uncertain.

Government—The government structure is based on the constitution approved in July 1972 and amended in 1976. The executive branch consists of a 15-member Council of State, which exercises certain legislative and executive functions, and the Council of Ministers (cabinet) which, through the ministries, implements and administers national policies and programs.

The parliament, or the Sejm, performs legislative functions. The constitution grants sovereign powers to the parliament, composed of 460 members elected every 4 years from a list developed by the Front of National Unity. This organization includes representatives of the three political parties, Polish United Workers' Party (Communist), United Peasant Party, and Democratic Party; Catholic representatives; political independents; and mass organizations. In practice, policies are formulated by the party apparatus and submitted by their deputies for parliamentary approval.

State administration has two levels, the basic administrative unit, the commune (gmina), and the regional unit (voivodship). Of 2,070 communes, 1,533 are rural and 537, urban-rural. Heads of communes are responsible for developing agriculture in the local community and answer to higher state authorities for all administrative, economic, and social matters entrusted to them. The legislative authority is the commune council, chosen in universal direct elections. Forty-nine regional administrative units are headed by the voivode, who supervises heads of communes and influences planning and organization of economic activities. The legislative authority is the voivodship council, which is elected directly.

In 1976, the Polish constitution was amended by adding "....Poland is a socialist state," "...Polish United Worker's Party is a leading political force in society," and "...Poland

strengthens its friendship and cooperation with U.S.S.R. and other socialist states." These constitutional amendments make it clear the Party is, in effect, the highest authority in the country.

Economy—Before World War II, Poland was an agricultural-industrial country, with 60 percent of the population engaged in agriculture.

The first phase of industrialization began with introduction of the 1950-55, 6-Year Plan, aimed at setting up an industrial base for economic development. Priority was given to developing mining, metallurgy, machine, and chemical industries. Investments for development of light industry, the food-processing industry, and agriculture were given second place. In the mid-1950's, this type of development led to much discontent. However, despite the 1956 Polish revolt, economic reforms were not extensive enough to promote growth.

The new leadership launched an ambitious industrial expansion and modernization program in 1970, financed in large part by Western credits. The economic development strategy sought to accelerate the country's economic growth with a simultaneous increase of wages and incomes of the population and satisfaction of material needs. Consequently, there was rapid expansion of investments, imports, and incomes, which by the mid-1970's placed a strain on the resources of the economy. Aggravating difficulties were poor harvests in 1974 and 1975 that slowed livestock production and necessitated large grain imports. Recession in the West limited Polish exports to these markets leading to growing trade deficits and hard-currency indebtedness.

Although production targets and priorities were altered in the 1976-80 economic plan, overall Polish growth has slowed progressively each year since the mid-1970's.[12] During the 1976-80 plan, real expansion was estimated at 8.3 percent, compared with 59 percent for the previous plan period. Total output failed to meet even reduced targets in this period. Contributing to the slowdown in economic activity were bottlenecks created by drastic reduction in imports from the West; lagging agricultural output, which rose only 1 percent between 1976 and 1979; and sluggish industrial exports.

Poland is an industrial-agricultural nation, with nonagricultural sectors providing for 84 percent of net material product in 1980. Per-capita GNP in 1981 was $4,960, the lowest among all Eastern European COMECON countries but Bulgaria.

Machine building is the leading Polish industrial sector, including a wide variety of products ranging from railroad locomotives and mining machinery to machine tools. Food processing ranks second and light consumer-goods production third in Poland's industrial sector. Recent emphasis has been on developing industries producing chemicals, notably fertilizers and petrochemicals, and on developing fuel resources. Poland is fifth in the world in hard coal output, sixth in sulfur, and seventh in steel.

Agriculture—An agrarian reform was proclaimed in 1944, which provided for division into smaller units all farms larger than 50 hectares in parts of central and eastern Poland and those larger than 100 hectares in western and northern regions. Reform was carried out without compensation. The maximum size of newly formed or enlarged farms was set at 5 hectares of average-quality land. Landless peasants, agricultural workers, land tenants, and owners of small farms benefited from land reform. Altogether, 814,000 new farms were set up and 254,000 farms were enlarged. The newly established state farms occupied 3 percent of the agricultural land in the country.

In 1945-48, collectivization of Polish farms was resisted successfully, thanks to the efforts of Gomulka, then head of the Polish Communist Party. Attempts at rapid collectivization of agriculture were undertaken in Poland after removal of Gomulka in 1949-50. These efforts gave poor results. Then, with launching of the 1950-55 plan, administrative pressures for setting up production collectives were intensified.[13] Some 10,510 production cooperatives were organized, but most were economically weak. When Gomulka was re-elected as party secretary in October 1956, policy toward individual farming changed, and most production collectives were dissolved and the remaining ones consolidated.[14]

During the 1950-55 plan, industrialization was carried out at the expense of agricultural production growth. Not only were investment allocations to agriculture curtailed but a system of obligatory deliveries by private farmers of basic agricultural products was established. Prices paid by the state for these products were much lower than market prices amounting, in effect, to a tax on agriculture. This system of obligatory deliveries had lowered agricultral profitablility, reducing production. To correct the ensuing imbalance between production and consumption, policies were revised after 1956,

[12]In the 1976-80 quinquennium, the original plan goal was growth of 40-42 percent, later revised to 26 percent.

[13]For elaboration see J.P. O'Hagan, ed., *Growth and Adjustment in National Agricultures*, (New York: Landmark Studies, Allanheld, Osmun/Universe Books, 1978), pp. 81-82.

[14]In 1956, only 1,534 collectives remained in Poland. Ibid.

giving greater incentives for farmers to increase production. These included increasing farm supplies, reducing compulsory deliveries, raising state procurement prices, and stimulating livestock production by increasing imports of grains and feeds.[15]

Agricultural policy after 1956 assigned an increasing role to "agricultural circles" in modernizing individual farming. These voluntary, self-governing peasant organizations hold agricultural authority over villages. Circles provide production services to agriculture, including mechanization of cultivation and harvesting, plant protection, building construction, and transport.[16] Additionally, some circles have group production of crops and livestock on government-owned or village land. Certain agricultural circles have consolidated "in-members" land to allow common cultivation of grains and other crops and livestock breeding.

Farm policy goals in the 1970's were aimed at:

- Stimulating agricultural production to a level allowing food exports to cover at least the cost of imported farm supplies and agricultural commodities,
- Increasing production scale, and
- Equalizing living and working conditions in urban and rural districts.

To achieve these goals, economic measures for managing agriculture have been increased and administrative measures reduced. These plans and aspirations remained unfulfilled, and Poland was forced to spend large amounts of hard currency to import food. The balance between grain, feed, and meat imports was unfavorable and worsened from year to year. A steadily increasing proportion of meat consumption now depends on imported feeds.

Poland has 19.4 million hectares of agricultural land, including 15 million hectares of arable land, 2.5 million hectares of meadows, 1.6 million hectares of pastures, and 279,000 hectares of orchards. Thus, there was 0.54 hectare of agricultural land per inhabitant in 1980. In 1980, 5.88 million persons, including the self-employed, were engaged in agriculture.[17]

Table 1—Structure of individual farms in Poland, 1981

Farm size		Share of private farms
Acres	*Hectares*	*Percent*
1.2- 4.9	0.5-2	30.0
4.9-12.5	2-5	29.3
12.5-17.3	5-7	12.7
17.3-24.7	7-10	12.9
24.7-37.0	10-15	9.8
37 +	15 +	5.3

Although official policy was to change small-scale family farming into large-scale socialist farming, Poland remained the only country in Eastern Europe, besides Yugoslavia, in which most farms are owned privately. In 1979, 3.1 million individual farms were operating in Poland. They held 66.4 percent of the agricultural land area, while 31 percent was cultivated by the public sector.[18]

The private farm sector consists largely of small farms, averaging fewer than 12 acres (5 hectares) (table 1). More than 60 percent of the total number of private farms was in the range of 1.2-12.5 acres (0.5-5 hectares), and only 14 percent had areas larger than 25 acres (10 hectares).[19] A minimum of 37 acres (15 hectares) of tillable land is considered necessary for both efficient farm production and an adequate family income in Poland.

More than half of Polish farms have part-time farmers who work in industry, construction, and service sectors. In additionn the age distribution of active farmers and their low education level reduce production potential. The majority of private-sector farmers are more than 55 years old, and two in five haven't finished elementary school.

Small farm size is a major hindrance to agricultural modernization by not allowing individual farmers to purchase mechanized equipment. Cooperatives or state enterprises must provide them instead. Compounding the agricultural problem is the high degree of fragmentation of Polish farms. In the mid-1970's, only 26.1 percent of private farms were in one piece.[20] [21]

[15] For an appraisal of the efficacy of these and other policy guidelines, *Growth and Adjustment in National Agricultures* op. cit., pp. 83-85.

[16] The circles' resources were provided through Agricultural Development Fund set up in 1959. Since 1971, the means for this fund have come from taxing individual farms. In the mid-1970's, 35,248 agricultural circles were operating in 88 percent of the villages.

[17] Polish agricultural employment statistics also include women and persons past retirement age (men 65 years and women 60 years old). Every third private farm is managed by a person more than 60 years old.

[18] In the public sector, 18.6 percent of the land was accounted for by state farms, 2.9 percent by collective farms, 1.8 percent by agricultural circles, and the remaining 7.7 percent by other public organizations.

[19] The law limits any property to a maximum of 247 acres (100 hectares).

[20] Fragmentation is inherently wasteful, because much land is taken up in boundaries, farmers lose time going from one plot to another, and use of mechanical equipment for field work is prevented.

[21] Additional information on organization of agricultural production and marketing in Poland is given in Appendix 2.

Foreign Trade—Foreign trade plays an important role in Poland's economy, representing 21.8 percent of GNP in 1980. Agricultural and food products have diminished in importance in Poland's external trade since 1960, and by 1980 these products made up 16.2 percent of total imports and supplied 6.7 percent of total exports. Poland has been a consistent net importer of food and other agricultural products.

Agricultural products and basic materials are the principal Polish exports to the West, while chemicals, machinery, and other finished products comprise the bulk of shipments going to COMECON partners. Oil, iron ore, other raw materials, and some agricultural products are the major imports from U.S.S.R. From Eastern European partners and the West, Poland imports mainly industrial goods. Electrical engineering products are the leading items in both exports and imports, and fuel and power are the second-ranking trade category. The energy sector imports oil and gas and exports coal and coke, resulting in a near balance of trade in 1978 and a first-time switch into deficit in 1979 that continued into 1980. Metallurgical products constitute the third largest import category, while products of light industry rank third in value among exports.

Grains and oilseed products are the chief agricultural imports, followed by cotton and cattle hides. A large volume of meat imports was required in 1976-77 and 1980 to meet domestic demand. The major item in Polish food exports are livestock products, notably canned hams, bacon, other canned meats, fresh meats (mainly beef), and cheese.

CONSUMPTION, PRODUCTION, AND TRADE: TRENDS AND PROSPECTS

Consumption Trends in Meat, Grain, and Oilseeds

A major factor responsible for an increase in grain and oilseed import needs in the sixties and seventies among the Eastern European countries was a program to enhance the diet of the populace by making more meat and other animal products available. Per-capita meat consumption in Czechoslovakia increased 52 percent in 1982, compared with the 5-year average in 1961-65. Consumption also increased 60 percent in G.D.R., 55 percent in Hungary, and 39 percent in Poland (table 2). Since 1980, per capita meat consumption in Poland has declined to levels of the early 1970's. Egg and dairy consumption per capita also rose during this period. This drive to upgrade diets through increased protein consumption derived from animal sources was supported by a buildup in livestock numbers. Total livestock, poultry, and horse numbers, weighted in terms of grain-consumption units, increased by 26 percent in Czechoslovakia, 27 percent G.D.R., 29 percent in Hungary, and 31 percent in Poland from 1960 to 1979.

Total meat production increased by 39 percent in Czechoslovakia, 30 percent in G.D.R., 39 percent in Hungary, and 29 percent in Poland in 1979, compared with the average for 1961-65. Modern feeding practices involving greater use of concentrates, including protein supplements and scientific breeding practices, account for meat production increasing proportionately more than animal numbers in all countries except Poland.

Effects of larger livestock herds and greater use of modern mixed feed rations have increased consumption of both grain and oilseed products. Though grain consumed for nonfeed uses has increased little and even declined on a per-capita basis, total grain consumption between 1961-65 and 1982 increased by 53 percent in Czechoslovakia, 60 percent in G.D.R., 75 percent in Hungary, and 39 percent in Poland (table 3).

Oilseed-product consumption, particularly of soybeans and soybean meal, also increased significantly in the seventies, as these countries adopted modern mixed feeding practices, including greater use of protein supplements in animal feed rations.

Czechoslovakia increased domestic use of soybean meal from

Table 2—Per-capita annual consumption of meat, 1961-82

Year	Czechoslovakia	G.D.R.	Hungary	Poland
		Kilograms		
1961-65 (Avg.)	53.0	56.6	47.1	41.7
1966-70 (Avg.)	60.8	63.0	50.2	48.1
1971	73.7	68.5	59.5	56.1
1972	75.8	70.8	61.5	59.3
1973	76.7	73.5	63.7	62.1
1974	78.4	75.3	66.2	65.6
1975	81.1	77.8	68.5	70.3
1976	81.0	80.9	67.5	70.0
1977	81.4	83.5	68.9	69.1
1978	83.2	86.1	71.2	70.6
1979	84.3	87.8	70.4	73.0
1980	85.6	89.5	71.7	74.0
1981	86.6	90.5	72.0	65.0
1982	80.3	90.6[1]	73.0	58.0[1]

[1] Estimated

Sources: (1961-70) U.S. Department of Agriculture, Economic Research Services, *The Feed and Livestock Economy of Eastern Europe: Prospects to 1980;* Foreign Agricultural Economic Report No. 90 (October 1973), p. 28; and U.S. Department of Agriculture, Economic Research Service, *Eastern Europe Agricultural Situation: Review of 1982 and Outlook for 1983* (June 1983), p. 24.

21,000 metric tons in 1965 to 626,000 metric tons in 1982. During the same period, G.D.R. increased its consumption of soybean meal from 808,000 to one million metric tons; Hungary, from 59,000 to 614,000 metric tons; and Poland, from 58,000 to 779,000 metric tons.

Production Trends in Grains and Oilseeds

Wheat

Eastern Europe occupies a comparatively minor position in the world wheat economy. In 1981-82, the region accounted for 4 percent of the world's wheat plantings and 7 percent of total output. Wheat is the most important grain crop in Eastern Europe. Production increased at an average annual rate of 3 percent between 1960-61 and 1981-82, reaching a record 35.5 million metric tons in 1978-79 (fig. 5). The proportion of wheat in total grain production increased from 30 to 37 percent in the reference period.

All expansion in production resulted from improvement in average yields. Total seeded area fluctuated slightly but was the same in 1982-83 as in 1960, 9.2 million hectares. Wheat yields remained comparatively low until the mid-1960's but have doubled since then.

Wheat yields are highest in G.D.R., Hungary, and

Czechoslovakia and lowest in Poland. Average wheat yields in the three highest countries are about double the U.S. average yield. Differences in yields mainly reflect varying degrees of production intensification, measured by farm size, use of total production inputs, and soil and climatic conditions. Geography makes the wheat crops of Poland and Hungary subject to drought. Increases in the production area of irrigated wheat, however, have softened the adversities of drought on yields over the years. Wheat is the predominant grain crop in Czechoslovakia.

Corn

Corn is the principal grain produced in Hungary (fig. 6). Both Poland and G.D.R. are too far north to grow corn for grain, and Czechoslovakia has limited area suitable for corn. Hungary achieved the highest yields, which rose from 2.5 tons per hectare in 1960-61 to 6.8 tons in 1982-83. During 1982-83, U.S. corn yields, by comparison, averaged 7.2 tons per hectare. Apart from their relatively low level, Eastern

Table 3—Domestic grain consumption by country, 1960-83

Year	*Czechoslovakia*		*G.D.R.*		*Hungary*		*Poland*	
	For feed	Total	For feed	Total	For feed	Total	For feed	Total
				1,000 metric tons				
1960	4,049	7,195	4,200	8,105	4,286	7,335	8,980	17,319
1961-65 (Avg.)	3,805	7,330	4,452	7,493	4,541	7,078	9,672	17,897
1966-70 (Avg.)	5,059	8,764	6,044	8,920	5,575	8,220	10,770	19,251
1972	6,415	10,390	7,374	11,192	6,799	9,962	14,753	24,228
1973	6,509	10,304	7,709	11,172	6,690	9,179	14,284	23,004
1974	6,808	10,543	8,198	10,850	7,402	10,173	15,394	24,377
1975	7,276	11,184	8,796	12,815	7,963	11,222	17,832	26,481
1976	7,219	11,254	8,723	13,597	7,302	10,583	17,033	25,612
1977	7,327	11,172	8,732	12,642	8,006	10,512	17,050	25,481
1978	7,378	11,416	6,945	11,571	8,187	11,510	18,300	26,882
1979	7,475	11,916	7,592	12,267	8,687	12,517	19,450	28,122
1980	7,874	11,188	7,388	12,356	8,650	11,650	17,350	25,662
1981	7,900	11,930	7,680	11,702	9,163	11,977	16,076	25,615
1982	7,191	11,221	7,935	11,957	9,575	12,390	15,641	24,907
1983[1]	7,200	11,230	7,587	11,609	9,810	12,610	14,571	23,917

[1] Estimated.

Source: Compiled from data supplied by U.S. Department of Agriculture, Foreign Agricultural Service, Grain and Feed Division.

Figure 5

Wheat Acreage and Production in Selected Eastern European Countries

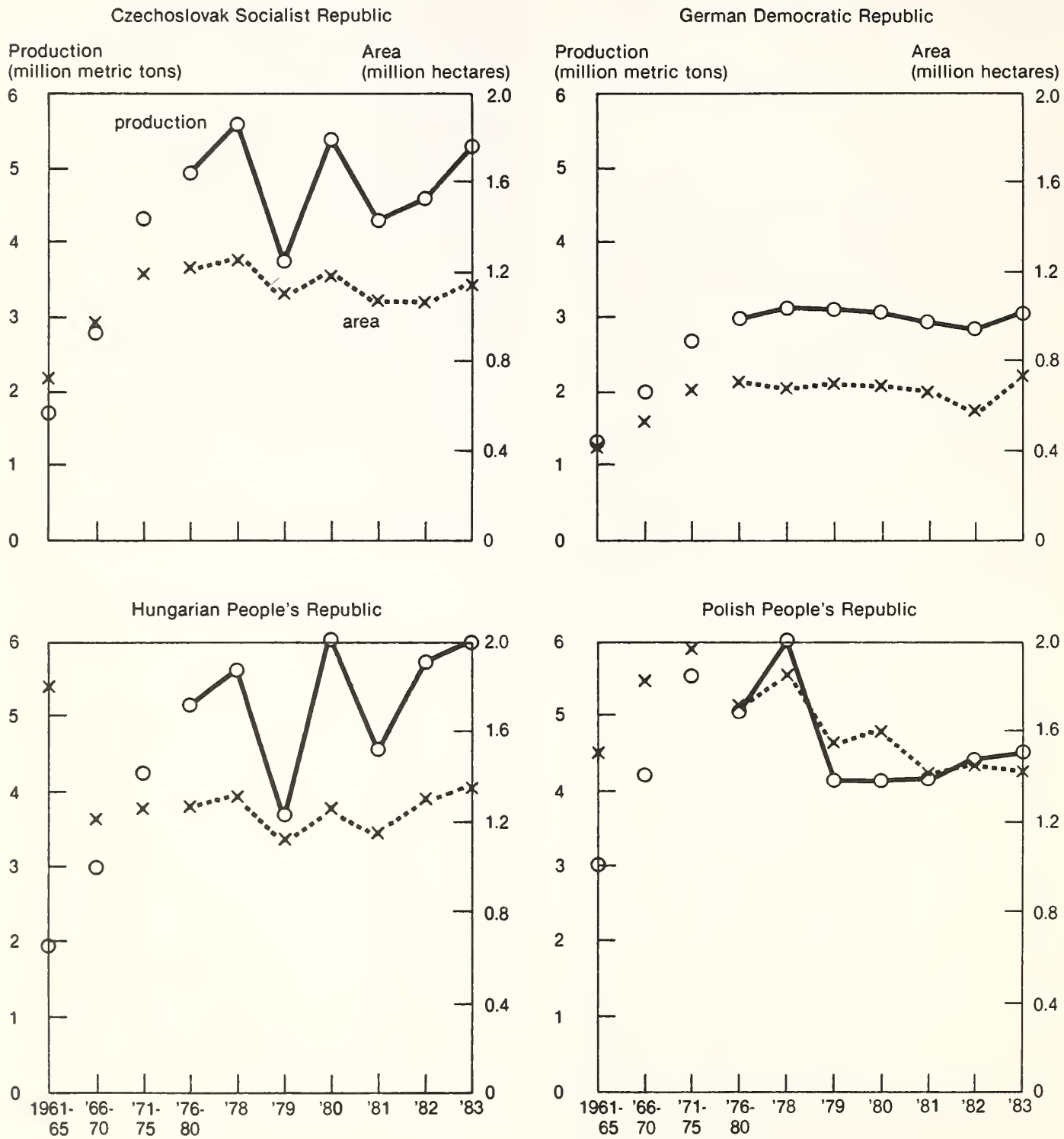
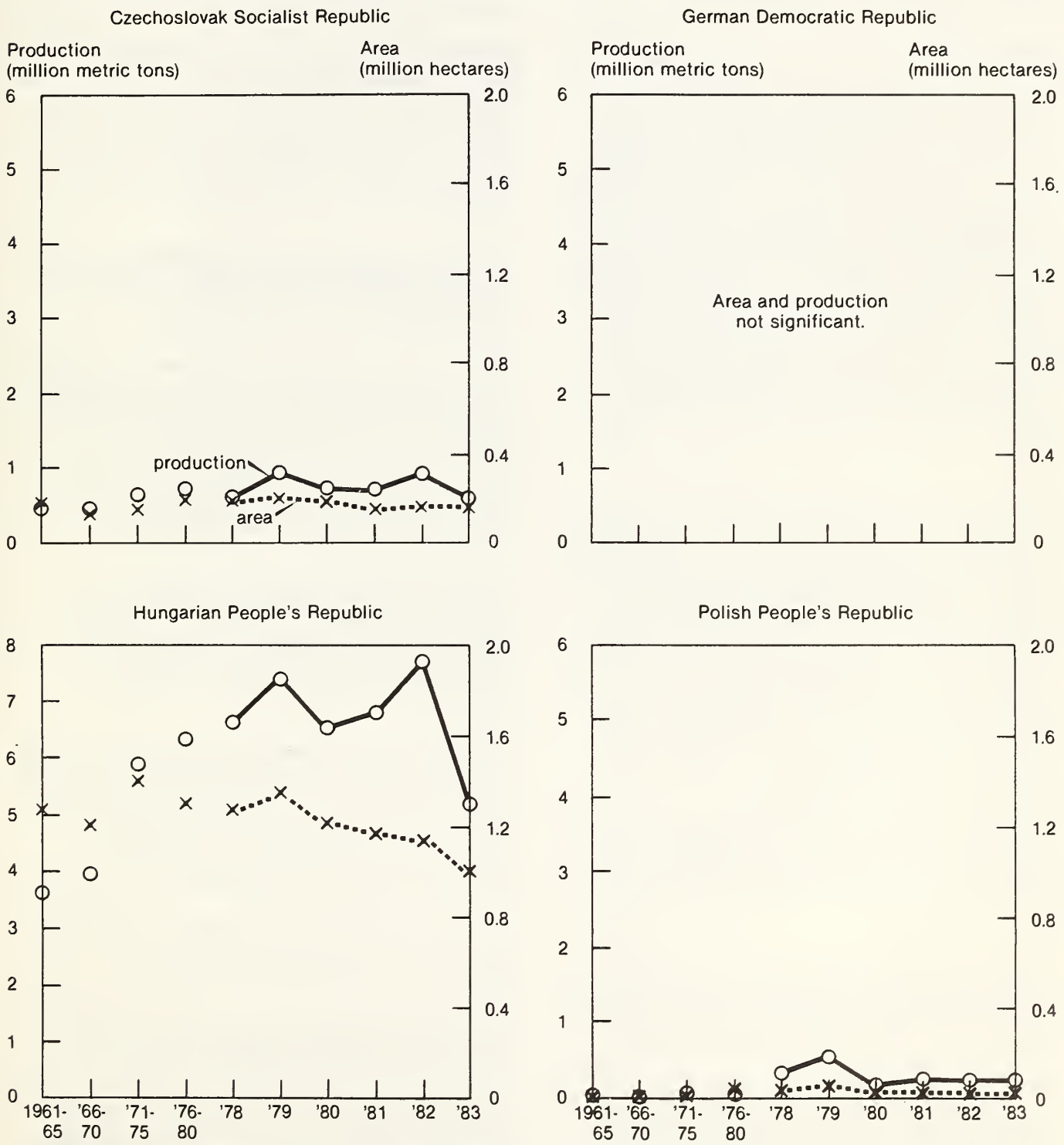


Figure 6

Corn Acreage and Production in Selected Eastern European Countries



European corn yields also are subject to high year-to-year fluctuations. Hungary was among the countries experiencing the greatest fluctuations in corn yields in the world during 1960-75.[22]

Barley

Eastern Europe is fifth among world regions in barley production. Its share of world barley output was in the range of 9 to 10 percent. Within the region, barley production has grown at a faster pace than that of other grain crops. Output rose from 6.8 million tons in 1960 to 17.4 million tons in 1982 (fig. 7). In contrast with corn and wheat, much of the increase in barley production stemmed from the larger sown area, which expanded at an annual rate of 2.2 percent in the 22-year period. Within that period, average barley yield went up by 1.9 percent a year, while the rise in average wheat and corn yields was about 3.4 percent per year. Growth in barley output was achieved, to a large extent, by reducing sowings of rye and oats. Barley is now the principal grain crop in G.D.R. and the main coarse grain crop in Czechoslovakia. G.D.R. is the leading barley producer in the region and Poland, the second largest.

Oats

Eastern Europe is a major oat-producing region, contributing 8 to 10 percent to world production in the 1970's. Within the region, oats are of declining importance among the grain crops produced, contributing merely 4 percent to total grain output in 1982. In 1960-61, oats accounted for 10 percent of the region's grain crop. Sowing of oats has declined steadily over the period 1960-61 to 1982-83, resulting in a drop in output to 4.4 million tons in 1982-83 (fig. 8). The modest improvement in yields was not sufficient to offset the decline in sowings. Most of the land diverted from oats was shifted to barley production. Area sown and production in 1981 and 1982 increased slightly over 1980 levels.

Poland is the leading oat producer in the region, accounting for more than half of total output. Although replaced to considerable extent by barley acreage, the area devoted to oats still covered 15 percent of the total grain area in 1981-82.

Rye

Eastern Europe, with an output volume close to U.S.S.R.'s, is the second largest rye-producing region, accounting for 40 percent of the world total in 1982. Because of sharper cutbacks in production by the major rye-producing areas, Eastern Europe's share in total production actually increased during the period under examination (fig. 9).

Oilseeds

The two major oilseed crops in Eastern Europe are sunflower seed and rapeseed. Rapeseed is the leading crop in Czechoslovakia, G.D.R., and Poland and sunflower seed in Hungary, Bulgaria, and Romania (fig. 10). Czechoslovakia is the smallest oilseed-producing country in Eastern Europe. In 1982, it produced only 220,000 tons of oilseed of which rapeseed accounted for 180,000 tons and sunflower seed for 35,000 tons.

Since 1971, rapeseed production has increased steadily aided by expanded plantings and improved yields. Sunflower seed area has expanded since 1979, but production is still on a limited scale.

Some soybean production exists, but it is more an experiment than a commercial undertaking. Production is confined mainly to the southern countries, notably Romania and Bulgaria. Combined production in the region grew by more than 10 percent a year, with an almost 11-percent annual increase in planted acreage. Soybean acreage and production reached record levels in 1979-80. Of the 1982 regional output of 731,000 tons, Romania produced 350,000 tons and Yugoslavia 200,000 tons.

Rapeseed is G.D.R.'s principal oilseed crop, representing about 97 percent of oilseed production. The remainder consists of flax, mustard seed, and poppy seed. The area planted to rapeseed has not changed much since 1975, averaging 125,000 hectares, with an average output of 300,000 tons.

Hungary is the largest producer of oilseeds among the four countries in this study. In 1981, she produced a record 752,000 tons of oilseeds of which sunflower seed contributed 624,000 tons. Sunflower production in 1983 is estimated at 610,000 tons. Plantings increased sharply in 1979 and further expansion was made in 1980 and 1981, reaching a high of 306,000 hectares. Plantings declined slightly in 1982 and 1983.

Rapeseed is the second-ranking oilseed crop in Hungary, but production amounted to only 70,000 tons in 1982. The area planted to rapeseed has grown little since 1976.

Soybean cultivation apparently is not considered profitable in Hungary, and area planted with this crop was reduced from 39,000 hectares in 1976 to 29,000 hectares in 1982.

Rapeseed is practically the only oilseed crop grown in Poland. Production, however, has been quite variable, due to poor weather conditions. In 1982, Poland harvested a 430,000-ton

[22] D.C. Lyons and R.L. Thompson, *The World Corn Economy in Perspective*, Station Bulletin 163, (West Lafayette, Ind: Purdue Agricultural Experiment Station, June 1977), p. 10.

Figure 7

Barley Acreage and Production in Selected Eastern European Countries

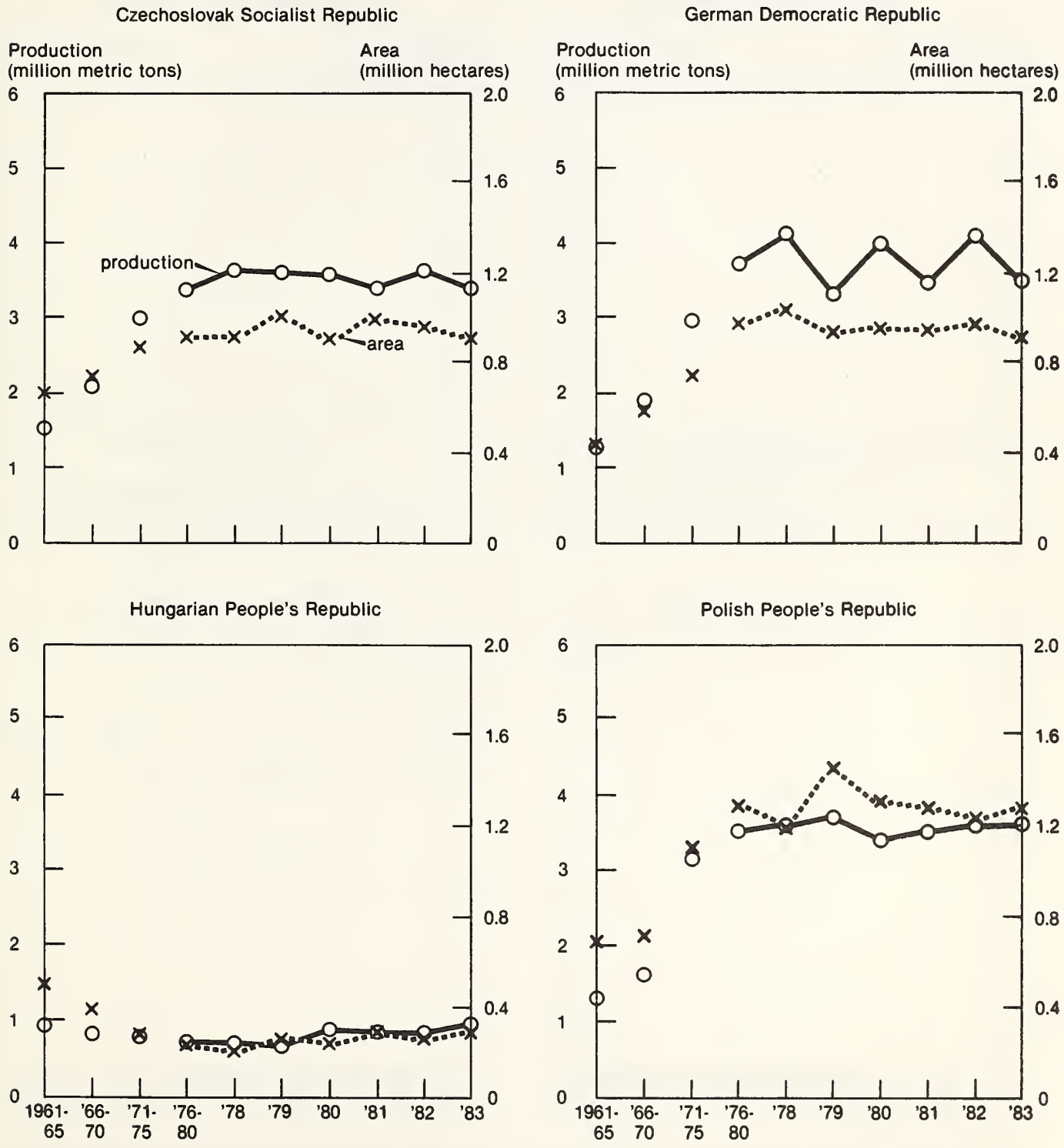


Figure 8

Oat Acreage and Production in Selected Eastern European Countries

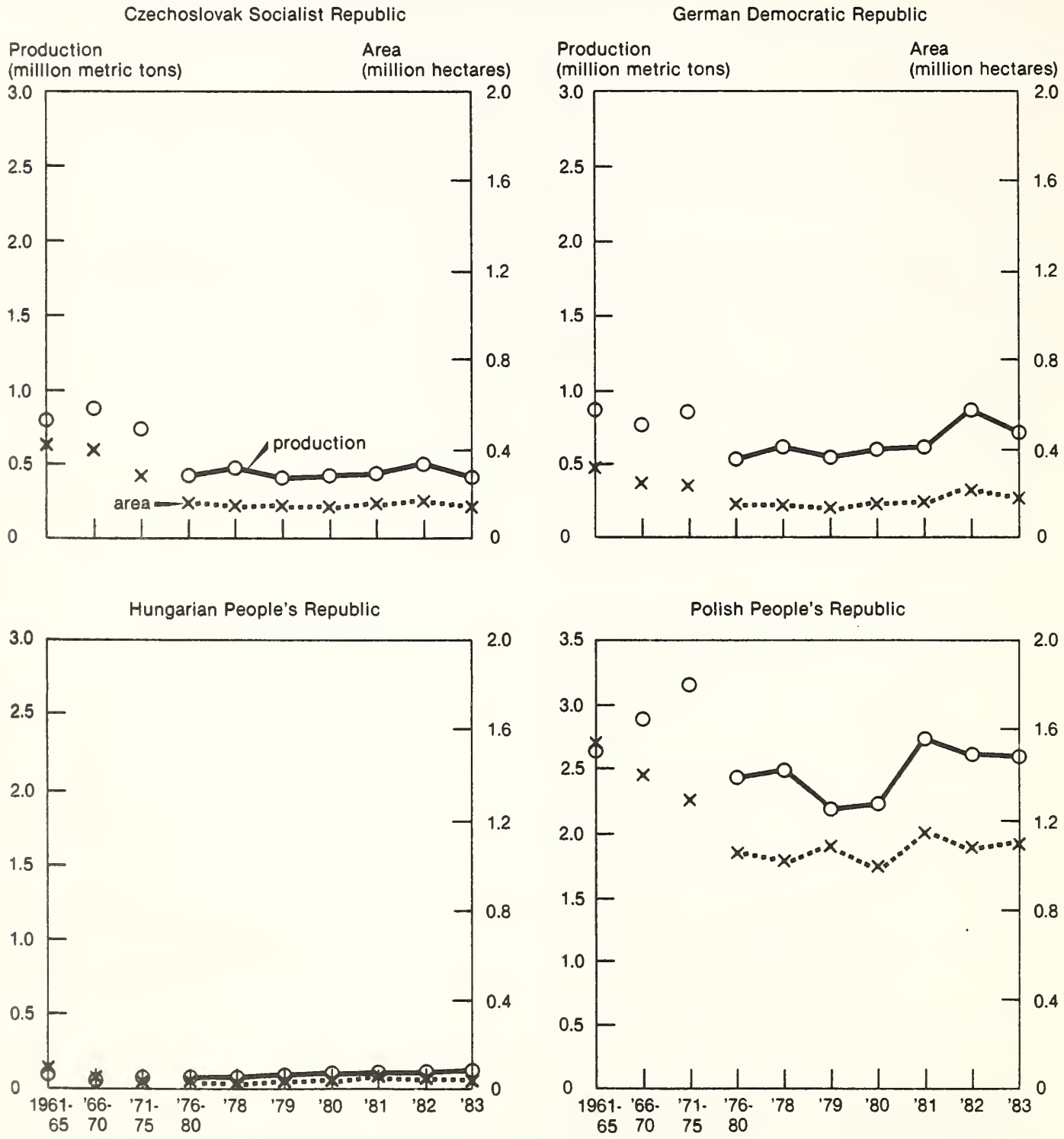


Figure 9

Rye Acreage and Production in Selected Eastern European Countries

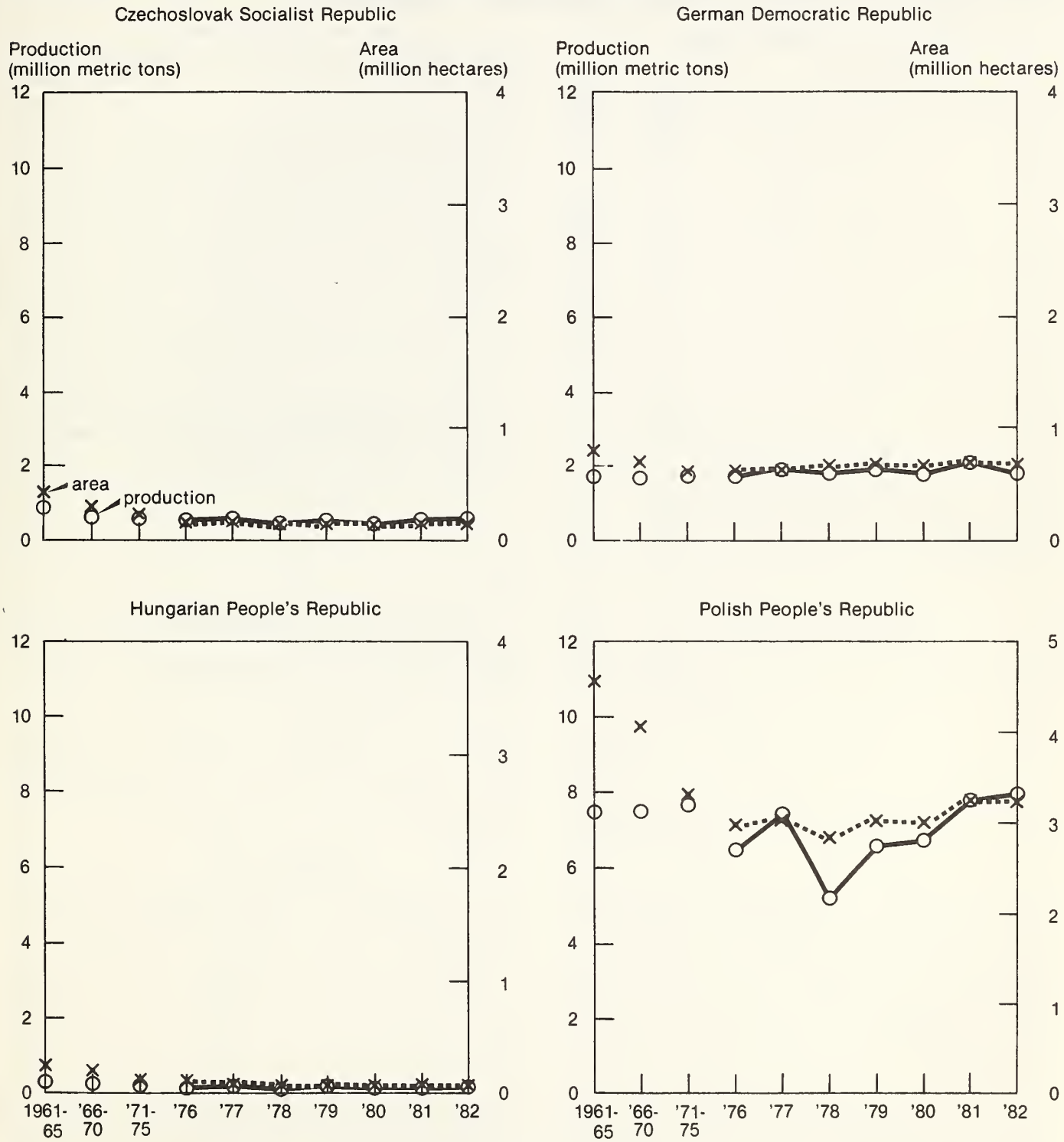
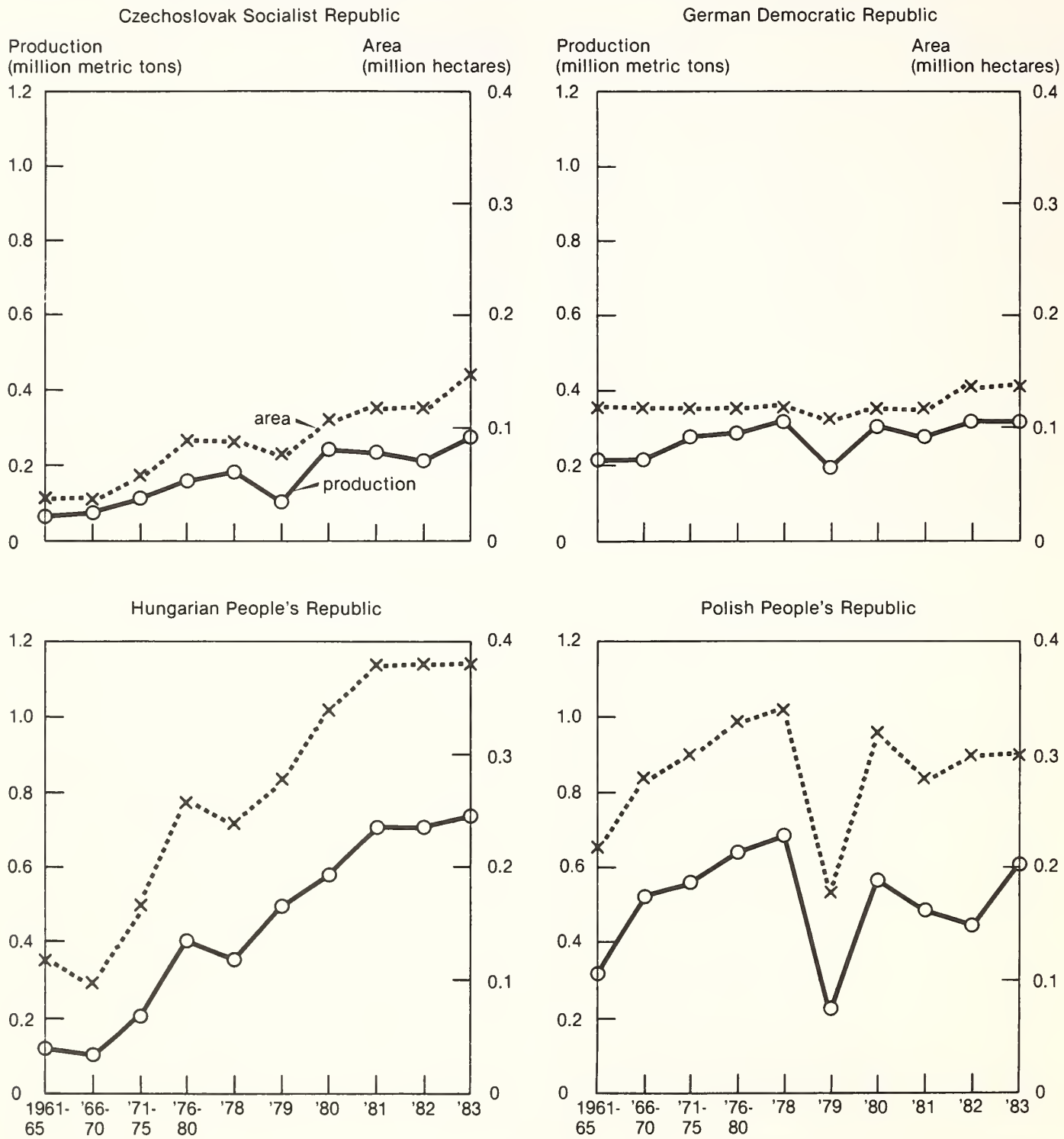


Figure 10

Oilseed Acreage and Production in Selected Eastern European Countries



crop on 260,000 hectares, compared with an output of 980,000 tons in 1976. Experiments to grow soybeans so far have been unsuccessful, due to an unsuitable climate.

Level of Self-Sufficiency in Grains and Oilseeds

Grain

All four countries in the study have embarked on programs to modernize and expand their livestock industries to meet domestic demands for increased meat consumption. Self-sufficiency in grain production has been another stated goal of these governments, but as table 4 indicates, only Hungary has achieved it. Czechoslovakia, on average, produced 92 percent of domestic consumption in 1982, compared with 80 percent in the late sixties. Over the same period, G.D.R. and Poland have witnessed decreases or only small increases in the share of total grain consumption met by domestic production. G.D.R. produced domestically an average of 77 percent of total consumption in the late sixties, but dipped to 72 percent in the period 1976-80. The share increased the last two years, ending at 83 percent in 1982. Poland has experienced reduction in ability to meet grain needs, producing an average of 75 percent domestically in 1976-80, as opposed to 88 percent in the late sixties. Like G.D.R., Poland's share increased in the last two years, totaling 86 percent in 1982.

Table 4—Level of self-sufficiency in grains, 1960-82[1]

Year	Czechoslovakia	G.D.R.	Hungary	Poland
		Percent		
1960	80	79	93	86
1961-65 (Avg.)	75	78	93	84
1966-70 (Avg.)	80	77	99	88
1972	84	69	97	82
1973	84	76	116	89
1974	92	78	114	90
1975	93	76	110	87
1976	82	66	114	76
1977	82	65	107	82
1978	90	75	106	72
1979	92	80	106	77
1980	82	72	103	68
1981	89	76	104	80
1982	92	83	115	86

[1] Production expressed as a percentage of estimated domestic consumption.

Source: Compiled from data supplied by U.S. Department of Agriculture, Foreign Agricultural Service, Grain and Feed Division.

Table 5—Feed grain imports by Czechoslovakia, 1961-83

Year	Corn	Oats	Barley	Rye	Sorghum	Total
			1,000 metric tons			
1961	130	[1] —	114	182	—	426
1962	300	—	144	172	—	616
1963	289	—	156	62	—	507
1964	433	—	396	41	3	873
1965	155	—	595	32	1	783
1966	293	5	135	53	385	871
1967	138	17	162	176	280	773
1968	263	—	125	120	—	508
1969	217	2	197	85	4	505
1970	122	—	139	76	—	337
1971	480	—	133	215	2	830
1972	302	3	112	41	2	460
1973	469	—	132	—	—	601
1974	332	—	90	—	—	422
1975	283	—	82	—	—	365
1976	1,260	—	158	—	—	1,418
1977	471	—	272	—	—	743
1978	590	—	20	—	—	610
1979	1,206	—	11	46	—	1,263
1980	1,181	—	169	24	—	1,374
1981	800	—	70	—	—	870
1982[2]	750	—	—	—	—	750
1983[3]	600	—	50	—	—	650

[1] Less than 0.5.
[2] Preliminary.
[3] Estimated.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Grain and Feed Division.

Imports of feed grains by type and country are shown in tables 5 to 8. The four countries combined imported 3.6 million metric tons of feed grains in 1982, an 18 percent increase from the level imported in 1970, but only two-fifths of the 9.7 million metric tons imported in 1980. Corn and barley are the major feed grains imported by the region. Corn accounted for 97 percent of feed grain imports in Czechoslovakia, 73 percent in G.D.R., and 56 percent in Poland in 1980. Hungary has been a net exporter of corn in most years.

Except for Poland, wheat imports of countries in this study have declined in the seventies, compared with that of the sixties (table 9).

Table 6—Feed grain imports by German Democratic Republic, 1961-83

Year	Corn	Oats	Barley	Rye	Sorghum	Total
	1,000 metric tons					
1961	177	124	124	245	[1]—	674
1962	412	1	141	448	3	1,005
1963	287	—	89	282	—	658
1964	309	—	219	101	—	629
1965	183	—	289	1	1	474
1966	295	—	128	111	72	604
1967	352	—	203	50	85	670
1968	394	—	170	35	58	657
1969	314	—	218	92	60	684
1970	411	—	799	49	—	1,259
1971	656	—	187	40	22	905
1972	1,031	—	875	30	—	1,738
1973	1,086	—	298	1	—	1,385
1974	1,328	—	104	—	11	1,443
1975	1,795	—	390	—	21	2,208
1976	2,346	—	796	—	192	3,334
1977	940	—	581	—	87	1,588
1978	1,229	25	806	—	733	2,788
1979	1,201	100	1,181	—	400	2,868
1980	3,161	—	564	—	211	3,936
1981	1,823	—	582	—	—	2,405
1982[2]	1,365	—	500	—	—	1,865
1983[3]	800	—	1,400	—	25	2,225

[1] Less than 0.5.
[2] Preliminary.
[3] Estimated.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Grain and Feed Division.

Table 7—Feed grain imports by Hungary, 1961-83

Year	Corn	Oats	Barley	Rye	Sorghum	Total
	1,000 metric tons					
1961	120	2	64	[1]—	2	188
1962	429	8	54	—	1	492
1963	162	—	118	29	1	310
1964	140	—	100	4	1	245
1965	71	3	382	—	21	477
1966	56	1	41	—	40	138
1967	—	—	10	50	36	96
1968	75	—	74	—	51	200
1969	2	1	45	10	8	66
1970	1	2	23	—	15	41
1971	182	8	209	30	9	418
1972	108	44	548	54	8	780
1973	—	18	199	49	5	271
1974	3	53	333	—	5	394
1975	—	28	101	17	—	144
1976	20	5	153	3	8	187
1977	248	5	31	—	—	284
1978	284	5	95	8	9	399
1979	—	—	287	18	—	303
1980	30	—	84	15	—	129
1981	9	—	48	20	—	75
1982[2]	—	—	100	15	—	115
1983[3]	100	—	100	25	—	225

[1] Less than 0.5.
[2] Preliminary.
[3] Estimated.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Grain and Feed Division.

Table 8—Feed grain imports by Poland, 1961-83

Year	Corn	Oats	Barley	Rye	Sorghum	Total
	1,000 metric tons					
1961	90	[1]—	270	108	97	565
1962	19	—	210	321	108	658
1963	162	—	216	252	491	1,121
1964	159	8	297	461	151	1,076
1965	660	52	415	—	96	1,223
1966	506	24	536	—	48	1,114
1967	192	1	193	70	131	587
1968	235	2	555	3	61	856
1969	419	2	559	63	47	1,090
1970	182	1	1,165	69	25	1,442
1971	235	1	336	180	40	772
1972	355	7	1,834	80	2	2,078
1973	496	52	849	54	—	1,251
1974	791	107	972	39	28	1,935
1975	651	96	1,132	54	317	2,250
1976	2,035	132	742	214	578	3,701
1977	1,401	—	1,268	—	429	3,098
1978	1,807	120	2,413	125	511	4,976
1979	2,128	83	1,498	332	282	4,323
1980	2,523	100	1,130	150	319	4,222
1981	1,157	24	384	156	—	1,721
1982[2]	500	50	500	100	—	1,150
1983[3]	400	50	400	50	—	900

[1] Less than 0.5.
[2] Preliminary.
[3] Estimated.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Grain and Feed Division.

Oilseeds

Along with rapid expansion and modernization of livestock industries, the four Eastern European countries in this study have increased sharply imports of oilseeds, especially soybean meal and, to a lesser extent, whole soybeans. Rapeseed and sunflower seed are the only major oilseeds grown in the region. Some quantities of peanut meal, fishmeal, and other protein meal sources are imported, but soybeans and products are the major imported meals. The United States and Brazil are major exporters of soybeans and soybean meal to the region. Substantial quantities of soybean meal are imported from Western European crushing plants. Tables 10-13 show soybean and soybean-meal imports have increased rapidly in both absolute and relative terms in the seventies, compared with the sixties, for all four countries. Imports in the 1980's have declined slightly from levels of the late 1970's for all four countries.

Grain and Oilseed Trade Prospects to 1990

Eastern Europe has been a strong and rapidly accelerating market for grain and oilseed products since the late sixties and through the seventies. Growth of imports was a result of efforts to increase per-capita consumption of meats by expanding and modernizing the regions's livestock industry. However, by the late seventies several factors were constraining this growth. In particular, balance-of-payments

Table 9—Wheat imports by selected Eastern European countries, 1961-83

Year	Czechoslovakia	G.D.R.	Hungary	Poland
		1,000 metric tons		
1961	1,127	1,250	508	1,592
1962	927	1,238	173	1,512
1963	1,365	1,023	363	2,016
1964	1,490	1,303	304	2,677
1965	934	1,225	208	1,769
1966	1,044	1,350	152	1,802
1967	1,215	1,184	217	1,628
1968	1,378	1,075	310	1,332
1969	1,246	1,311	302	1,174
1970	1,026	2,084	178	1,099
1971	1,318	1,867	405	1,910
1972	1,193	2,040	36	1,274
1973	1,066	1,594	[1]—	1,620
1974	671	1,219	2	1,758
1975	525	1,130	30	1,477
1976	689	1,691	33	2,311
1977	374	1,100	4	2,599
1978	257	687	—	2,311
1979	736	811	2	2,927
1980	537	476	1	3,466
1981	218	794	100	3,448
1982[2]	250	500	—	3,505
1983[3]	100	600	—	2,500

[1] Less than 0.5.
[2] Preliminary.
[3] Estimated.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Grain and Feed Division.

problems, exacerbated by rising energy prices, slowing industrial growth rates, and a disappointing export record are requiring Eastern European planners to look for ways to curtail growth of imports. Despite these problems, the region is expected to be a substantial importer of certain grains, especially feed grains and oilseed products, through the eighties. While self-sufficiency in grain production is a professed goal of policymakers in Eastern Europe, only Hungary is expected to be able to reach it by the end of the 1980's.

Import Projection Methodology

Projections of import needs for corn, other feed grains, and

Table 10—Imports of protein meals by Czechoslovakia, 1960-82[1]

Year	Soybean	Peanut	Fish	Other[2]	Total
		1,000 metric tons			
1960	36	19	0	38	93
1961	20	33	16	49	118
1962	19	37	23	83	162
1963	17	92	60	90	259
1964	34	140	86	94	355
1965	29	119	103	116	366
1966	44	169	94	99	406
1967	47	184	106	118	455
1968	47	199	106	136	489
1969	51	196	0	138	385
1970	50	227	145	142	564
1971	56	250	161	148	615
1972	295	273	141	159	868
1973	512	124	57	166	859
1974	374	158	57	159	748
1975	526	55	66	117	765
1976	496	111	89	112	807
1977	479	110	42	114	745
1978	494	118	49	86	747
1979	580	112	59	72	823
1980	709	39	76	83	907
1981[3]	656	8	6	52	722
1982[4]	604	na[5]	7	39	650[5]

[1] Includes the oilmeal equivalent of oilseeds imported. Data is expressed in terms of soybean meal raw protein equivalent. Conversion factors were derived from protein content values in *OilWorld Semi-Annual*, Selgfried Mielke (ed.) May, 1974. Factors used were: Soybean—1.00, peanut—1.13, fishmeal—1.41, sunflower seed—0.87, cottonseed—0.89, palm kernel—0.50, linseed—0.78, rapeseed—0.74, and copra—0.48.

[2] Consists primarily of cottonseed and sunflower seed cake and meal plus smaller quantities of linseed, rapeseed, palm kernel, and copra cake and meal.

[3] Preliminary.

[4] Estimate.

[5] Not available. Total excludes peanut meal.

Sources: Food and Agricultural Organizations of the United Nations, *Trade Yearbook*, Vols. XVIII-XXX1, (1964-77); Food and Agricultural Organization of the United Nations, *Yearbook of Fisheries Statistics: Fishery Commodities*, odd numbered Vols, XVIII-XLV; and U.S. Department of Agriculture, Foreign Agricultural Service, Oilseeds and Products Division.

Table 11—Imports of protein meals by German Democratic Republic, 1960-82[1]

Year	Soybean	Peanut	Fish	Other[2]	Total
	1,000 metric tons				
1960	0	2	0	23	2
1961	0	2	45	23	70
1962	0	7	38	25	70
1963	3	7	91	40	141
1964	8	7	66	42	122
1965	4	2	130	35	170
1966	0	4	137	53	194
1967	4	2	143	43	192
1968	0	1	175	44	220
1969	28	1	121	47	198
1970	463	1	197	64	726
1971	532	68	296	60	956
1972	751	57	113	109	1,029
1963	697	70	56	77	901
1974	733	83	196	90	1,101
1975	755	119	217	98	1,189
1976	756	1	250	68	1,074
1977	832	1	188	90	1,110
1978	932	4	138	80	1,154
1979	992	3	164	95	1,254
1980	1,107	2	494	131	1,734
1981[3]	920	na[4]	na	20	1,030
1982[3]	910	na	na	20	na

[1] See footnote 1, table 10.
[2] See footnote 2, table 10.
[3] Estimate.
[4] Not available.

Sources: See table 10.

Table 12—Imports of protein meals by Hungary, 1960-82[1]

Year	Soybean	Peanut	Fish	Other[2]	Total
	1,000 metric tons				
1960	45	2	0	2	93
1961	14	4	17	5	39
1962	25	118	38	13	194
1963	34	135	36	23	227
1964	54	123	44	38	260
1965	64	114	43	41	263
1966	68	133	45	61	307
1967	96	125	52	76	348
1968	105	147	67	40	360
1969	138	76	75	84	373
1970	241	74	85	46	446
1971	283	116	112	25	536
1972	250	105	96	42	492
1973	306	44	82	30	462
1974	463	74	92	46	674
1975	290	53	80	62	486
1976	497	30	60	17	604
1977	554	30	74	14	671
1978	654	0	69	20	743
1979	667	1	56	1	725
1980	618	0	57	3	678
1981	599	[3]—	na[4]	13	612[4]
1982	565	na	na	na	565[4]

[1] See footnote, 1 table 10.
[2] See footnote 2, table 10.
[3] Less than 500 tons.
[4] Not available. Totals exclude possible imports of peanut, fish, and other oilmeals.

Sources: see table 10.

Table 13—Imports of protein meals by Poland, 1960-82[1]

Year	Soybean	Peanut	Fish	Other[2]	Total
	1,000 metric tons				
1960	33	2	9	18	62
1961	18	9	15	13	55
1962	0	7	22	9	38
1963	15	14	41	6	76
1964	9	19	78	9	115
1965	48	18	89	18	172
1966	23	19	95	5	141
1967	37	2	120	6	165
1968	27	5	152	3	187
1969	89	2	168	7	267
1970	155	1	178	6	340
1971	165	3	162	6	336
1972	269	196	234	76	777
1973	463	183	183	156	985
1974	597	203	230	132	1,161
1975	623	246	196	159	1,226
1976	627	335	145	127	1,234
1977	756	174	133	118	1,180
1978	832	97	202	129	1,260
1979	1,098	151	240	124	1,613
1980	1,365	148	240	68	1,821
1981	1,236	136	89	298	1,759
1982[3]	715	149	70	280	1,214

[1] See footnote 1, table 10.
[2] See footnote 1, table 10.
[3] Preliminary.

Sources: See table 10.

soybeans, and other oilseed products for 1985 and 1990 were developed from a three-equation model estimated by the two stage least squares technique. Although multicollinearity, model specification, and data error problems adversely affected results of the model, it provides a basis for projecting overall import needs. Caution, however, must be exercised in interpreting the resulting projections.

The model relates import needs to changes in population and income that affect livestock inventories over time. It also considers world and each country's prices, domestic production, and hard-currency situation as factors affecting import demands. Because numerous other factors discussed in the text also must be considered, the reader should make objective judgments in the context of the political and economic environment. Estimated equations from which current projections are made are presented in Appendix tables 8 and 9.

In high projections, values for exogenous variables were estimated from trend equations and projected through 1985 and 1990. Low projections were based on the assumption that projected livestock inventories would stabilize at the 1980 level through 1985 and 1990. In most instances, a "most likely" import quantity was selected as the midpoint of high and low projections.

Net feed-grain and wheat imports for the four countries are projected to be 9.05 million metric tons in 1985 and 9 million

Table 14—Projected net import demand, 1985 and 1990[1]

Year	1971-75 Average (actual)	1975-80[2] Average (actual)	1985 (Projected)	1990 (Projected)
	1,000 metric tons			
Czechoslovakia				
Grains	1,490	1,601	1,273	1,185
Oilseeds & oilseed meals	770	806	844	908
G.D.R.				
Grains	3,105	3,851	2,904	3,069
Oilseeds & oilseed meals	1,035	1,265	1,304	1,455
Hungary				
Grains	493	268	[3] – 930	– 1,230
Oilseeds & oilseed meals	530	684	634	804
Poland				
Grains	3,266	6,794	5,823	6,043
Oilseeds & oilseed meals	897	1,422	1,042	1,197
Total Net Imports				
Grains	8,897	10,935	9,050	9,000
Oilseeds & oilseed meals	3,232	4,177	3,824	4,364

[1] See tables 15-17 and appendix tables 8 and 9 for detailed projections. The numbers in this table mask the fact the country may be importing one grain or oilseed commodity while simuiltaneously exporting another. Thus, the numbers may understate actual imports.

[2] Actual average for grain imports was for 1976-79 and for oilseeds, 1975-78.

[3] Negative numbers represents net exports.

metric tons in 1990 (tables 14 to 17). This represents a significant reduction in grain imports, compared with the late 1970's. However, U.S. grain exports have consisted primarily of corn and other feed grains, and feed-grain imports are expected to be much nearer to the level of the 1970's. Thus, Eastern Europe is expected to remain an important outlet for U.S. grain exports through the 1980's.

Oilseed imports, particularly soybean and soybean meal, which comprise more than two-thirds of all oilseed and oilseed-product imports, are projected to continue to increase in all four countries. Imports of oilseeds in soybean meal raw protein equivalent terms are projected at 3.8 million metric tons for 1985 and 4.4 million metric tons for 1990.

Unless successful adaptation of low erucic acid varieties of rapeseed is accomplished, relative and absolute increase in soybean-meal imports should continue. While hard-currency shortages restrict imports, the desire to reduce grain imports through improved feeding efficiency will likely require the authorities in all four countries to continue to allow greater soybean and soybean-meal imports through the next decade.

Import projections for grain and oilseeds in table 14 are useful indicators of broad trends projected for the forecast period. Such projections mask some important market considerations for specific grains and oilseeds and individual countries' peculiarities. The sections that follow discuss assumptions on which the overall projections are based as well as specific factors that influence import projections by commodity by country.

Projection Assumptions and Factors Influencing Imports In the Eighties

In the projections, two extreme scenarios were considered. From the standpoint of future feedstuff import prospects, the most optimistic scenario assumed trends in the sixties and seventies will prevail through the eighties, particularly expansion of livestock herds. This scenario is considered unlikely for the period 1980 to 1990. However, except for some Polish adjustments, livestock herds and feeding practices are unlikely to retreat significantly from levels achieved by the end of the seventies. Therefore, a lower level of import requirements was projected, assuming livestock herds would remain at the level achieved by the end of the seventies. Models used for projection purposes in this study incorporate these two scenarios.

Economic realities, particularly of foreign purchasing capacities of the four countries in the study, suggest feedstuff imports cannot be sustained at the rate of increase experienced in the past two decades. Balance-of-payments deficits have plagued Eastern European economies incessantly, as their goal of improving the balance of trade by expanding exports relative to imports has remained elusive. In the seventies, this problem resulted in pronounced increases in their hard-currency indebtedness (fig. 11).

The burden of this debt may be expressed in terms of debt-service ratios, which relate interest and principal repayments on foreign debt to exports. This ratio, frequently used as an indicator of the ability of a country to finance additional imports, has increased for all countries involved (table 18). Poland, in particular, is feeling the pressure of her increased foreign debt. This situation constrains these economies' ability to import in the future and casts doubt on their financial capacity in the eighties.

Table 15—Projected feed-grain import demand

Year	Czechoslovakia		G.D.R.		Hungary		Poland	
	Corn	Other[1] feed grains	Corn	Other[1] feed grains	Corn	Other[1] feed grains	Corn	Other[1] feed grains
	1,000 metric tons[2]							
1971-75 Average	373	162	1,179	365	55	343	506	1,152
1976-80 Average	942	140	1,775	1,123	116	144	1,985	2,086
1985								
High	837	575	1,705	[3]938	– 790	360	2,010	1,887
Low	553	– 1,074	– 1,097	[4]768	– 200	120	1,830	918
Most likely	[5]693	[6]100	[6]1,401	[7]853	[8] – 200	[8]120	[5]1,920	[5]1,403
1990								
High	994	[7]0	2,002	[3]1,065	– 989	371	2,456	2,241
Low	416	– 1,022	900	[4]871	– 350	120	2,095	302
Most likely	[5]705	[6]0	[5]1,451	[7]968	[6] – 350	[8]120	[5]2,276	[5]1,267

[1] Consists of barley, oats, rye, and sorghum. Sorghum is excluded in the projections.
[2] Negative value indicates net exports.
[3] High = 10 percent above trend.
[4] Low = 10 percent below trend.
[5] Midpoint between high and low projections.
[6] Projected on a judgmental basis.
[7] Trend.
[8] Average 1979-81.

Table 16—Net wheat import projections[1]

Country	Actual averages		Projection	
	1971-75	1976-80	1985	1990
	1,000 metric tons[2]			
Czechoslovakia	955	519	[3]480	[3]480
G.D.R.	1,570	953	[3]650	[3]650
Hungary	95	8	[4] – 850	[4] – 1,000
Poland	1,608	2,723	2,500	2,500

[1] Projections extrapolated from trend equations estimated from the years 1971-78. Poland's imports are assumed to be leveled off to 2.5 million metric tons annually due to its hard currency constraints.
[2] Negative values indicate net exports.
[3] Average 1978-81.
[4] Projected on a judgmental basis.

Other forces inhibiting import growth are present. Per-capita meat consumption, as mentioned earlier, has improved notably in the past two decades to the point Czechoslovakia and G.D.R., in particular, enjoy levels considered relatively high by European standards. At the same time, demographic trends are expected to have little positive influence on exports to the region. G.D.R.'s population actually has been declining and Hungary has had a zero growth rate. Furthermore, low population growth is expected in all of these countries at least through the end of the century.[23] This not only directly curbs the size of the market in Eastern Europe, but also indirectly curtails market prospects through adverse effects on economic growth created by manpower shortages.

Another important factor is how political considerations drive import demand. Workers' riots in Poland in 1970 and strikes in 1980 and 1981 have shown the Communist leadership in Eastern Europe the dangers of ignoring demands for an increased standard of living, including more meat and other food products.

[23] U.S. Department of State, *Eastern Europe: An Overview*, Department of State Publication 8953 (September 1978).

Table 17—Projected oilseed product import demand

Year	*Czechoslovakia*		*G.D.R.*		*Hungary*		*Poland*	
	Soybeans[1]	Other oilseeds[2]	Soybeans[1]	Other oilseeds[2]	Soybeans[1]	Other oilseeds[2]	Soybeans[1]	Other oilseeds[2]
				1,000 metric tons[3]				
1971–75 average	352	418	693	342	318	212	424	473
1976–80 average	552	254	924	341	598	86	936	486
1985								
High	710	402	1,436	589	752	180	1,079	95
Low	552	165	1,000	304	634	0	815	– 221
Most likely	[4]631	[5]213	[6]1,000	[5]304	[6]634	[6]0	[4]947	[6]95
1990								
High	879	425	1,781	693	922	179	1,337	124
Low	563	– 51	929	100	686	0	809	– 508
Most likely	[4]721	[4]187	[4]1,355	[6]100	[4]804	[6]0	[4]1,073	[6]124

[1] Includes soybean meal equivalent of beans.
[2] Expressed in terms of soybean meal raw protein equivalent. Includes peanut, rapeseed, sunflower seed, palm kernel, cottonseed, copra, linseed cake meal, and uncrushed imports of oilseeds and fishmeal.
[3] Negative values reflect net exports.
[4] Midpoint between high and low projections.
[5] Average 1975–78.
[6] Projected on a judgmental basis.

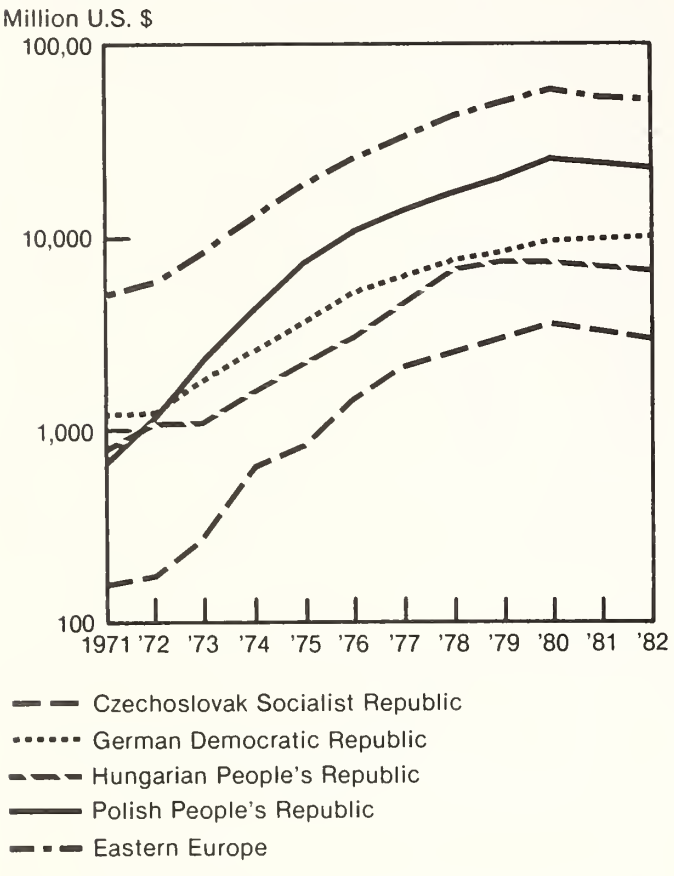
Table 18—Hard currency debt burden by country, 1972–80

Year	*Debt service as a share of exports*[1]				*Gross debts as a share of exports*[2]			
	Czechoslovakia	G.D.R.	Hungary	Poland	Czechoslovakia	G.D.R.	Hungary	Poland
				Percent				
1972	10	18	14	15	46	95	140	87
1973	11	20	16	19	43	96	102	111
1974	13	21	19	23	46	104	126	120
1975	14	25	19	30	48	169	185	194
1976	15	29	21	42	80	161	208	259
1977	17	38	25	59	95	210	259	286
1978	20	49	36	79	104	237	295	324
1979	22	54	37	92	97	252	231	337
1980[3]	[4]—	—	—	—	77	—	202	323

[1] Earnings from merchandise exports to non-Communist countries.
[2] Gross debt equals liabilities to Western governments, banks, suppliers, and other lenders. It is unadjusted for financial assets of COMECON countries in Western banks.
[3] Preliminary.
[4] Not available.

Figure 11

Net Hard Currency Indebtedness of Selected Eastern European Countries, 1971-82



Discontent of the populace and increasingly restrictive economic limits from declining productivity, poor export performance, mounting budget pressures created by large subsidies on foodstuffs, a chronic unfavorable external balance of payments and foreign debt situation, and setbacks for East-West political détente, create a difficult, if not impossible, environment for predicting future U.S. export potential to the region. Even the bounds imposed on projections in the study, particularly low import assumption figures, could be violated if Soviet-Western international relations deteriorate to a pre-détente status. Unfortunately, a lack of understanding exists of how the tensions of these political and social considerations interact with economic parameters in shaping future import demands.

The ideal way for policymakers in Eastern Europe to get around their dilemma is by increasing domestic production of grains and oilseeds. Prospects for increased domestic production completely solving the problem, however, are rather dim. While production of grain and oilseeds has increased, this was achieved primarily through improved yields, as new acreages of arable land were not avialable. Total grain production has increased in 1981, compared with the period 1961-65, by 71 percent in Czechoslovakia, 52 percent in G.D.R., 82 percent in Hungary, and 32 percent in Poland. However, 5-year moving averages for the period 1971 to 1979 reveal a definite decline in the rate of increase by the end of the seventies for Czechoslovakia, G.D.R., and Hungary, while Poland experienced an actual reduction in total grain production (table 19). All coutries experienced production increases in 1979-83, with Hungary and Poland having particularly large increases. Percentage of oilseed production has been increasing more rapidly. However, as the region is only about 22 percent self-sufficient in oilseed production, achieving adequate relief soon from import needs appears doubtful.

Czechoslovakia

Czechoslovakia was importing grain regularly in the range of 0.9 million to 2.2 million metric tons during the period 1975-82, the bulk of which was feed grains, principally corn. Wheat imports were in the range of 220,000-740,000 tons, but are projected to be only 100,000 metric tons in 1983.

The standing goal is near self-sufficiency in grain production for the medium term through 1985, and full self-sufficiency by 1990.

Plans for 1981-85 are to minimize grain import levels to 0.4.-0.5 million tons to be supplied by COMECON partners. Officials now hope to keep high protein-feed imports at the 0.7-million to 0.8-million-ton level, in line with purchases made over the past plan period.

Projections for grain imports to 1985 reflect a downward trend from the 1980-81 level, although not to the low level anticipated by Czech planners. Net grain imports are expected to decline to about 1.27 million tons in 1985 and to 1.18 million tons in 1990, of which 0.7 million metric tons will be corn (fig. 12).

This number could vary if livestock herds grow at rates significantly different from those assumed in the projections or if significant acreage is switched from wheat to corn.

Figure 13 indicates soybean and soybean-meal imports are projected to increase from the 1976-80 average of 552,000 metric tons (meal equivalent basis) to 631,000 metric tons in 1985, and 721,000 metric tons in 1990. Imports of other oilseeds are projected at 213,000 metric tons for 1985 and 187,000 metric tons for 1990.

Figure 12

Czechoslovakia Grain Imports, 1961-83, and Projections for 1985 and 1990

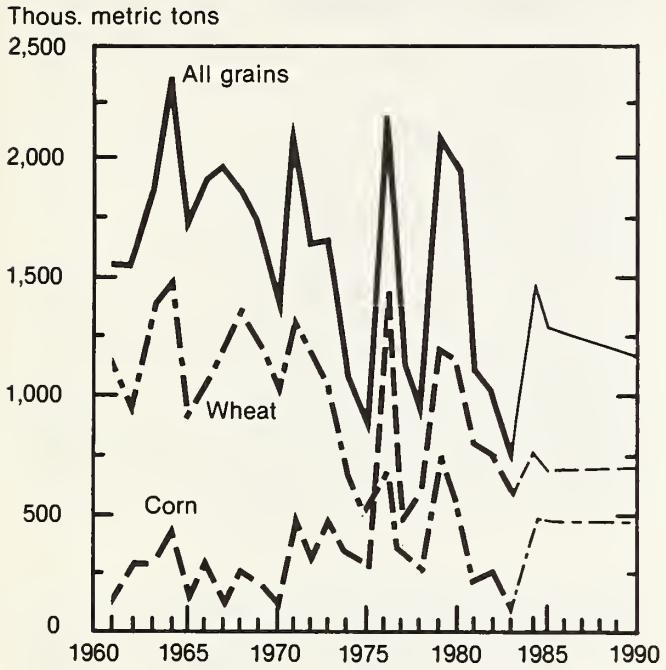
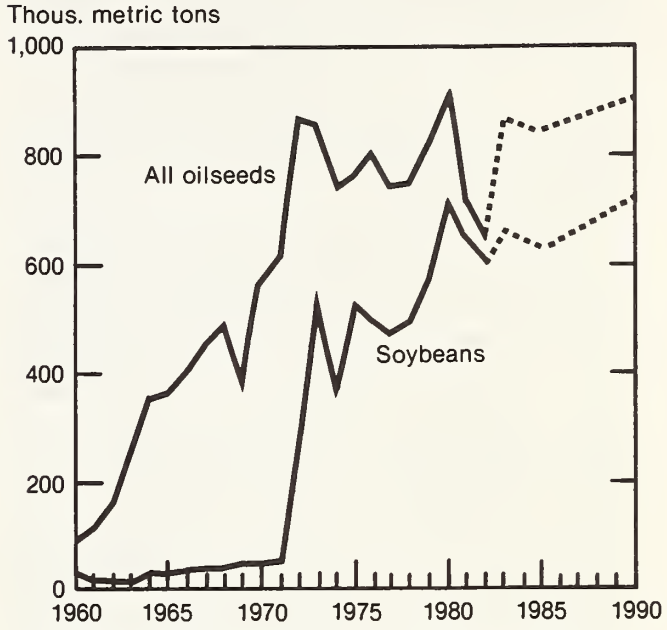


Figure 13

Czechoslovakia Oilseed Imports, 1960-82, and Projections for 1985 and 1990[1]



1979 and 1980 value for all oilseeds does not include fishmeal imports.
[1]Units expressed in terms of soybean meal raw protein equivalents.

Table 19—Production of grains, 5-year moving average

Year	Czechoslovakia	G.D.R.	Hungary	Poland
	1,000 metric tons			
1971-75	9,349	8,678	11,302	20,939
1972-76	9,427	8,768	11,626	21,130
1973-77	9,755	8,800	11,923	20,931
1974-78	10,013	9,064	12,256	20,867
1975-79	9,775	8,895	12,214	19,739
1976-80	10,084	9,038	12,545	19,494
1977-81	10,106	9,173	12,800	19,277
1978-82	9,894	9,123	12,690	19,175
1979-83	10,156	9,408	13,352	20,930

Source: U.S. Department of Agriculture, Economic Research Service *Agricultural Situation, Eastern Europe* (various issues)

These projections assume while livestock production and inventories will increase somewhat, they will not keep pace with the growth rate of the past decade. Domestic production of grain and oilseeds is assumed to increase at almost the same pace as in the past two decades. Further insights about factors potentially affecting imports through the middle of the eighties may be offered by the overtone and direction of the 5-year plan for 1981-85.

In general, 1981-85 plans indicate increased efforts toward expanding exports and reducing imports. In introducing new products and technologies, attention will be given to those with minimal requirements for investment and foreign exchange. While Czechoslovakia, like other Eastern European countries, is feeling the strain of hard-currency debt, it is relatively better off than the other countries in the study.

In agriculture, the overriding aim of the 1981-85 plan is limiting grain imports and increasing self-sufficiency in food. The underlying reason is the desire to minimize dependence on costly grain and protein-feed imports.

Agricultural production is targeted to rise by 10 percent and crop production by 14-16 percent from 1981 to 1985. Primary attention is to be paid to developing the grain and fodder base. The target for total grain output envisages an annual average of 11.2 million to 11.6 million tons, 11 to 15 percent greater than the 10-million-ton average during 1976-80. Priority is being given to corn, barley, and oats at some expense to wheat. Corn production, aided by increased planted area, is targeted to rise to 1.6 million tons by 1985, compared with 0.7 million tons in 1981. This is an overambitious goal with little chance of realization.

With 50 percent of arable land already in grain and no room for expansion, production targets must be reached through improved yields and mechanization and shifts in cropping patterns. Crop-production plans emphasize introduction of higher yielding varieties, particularly of feed grains with high amino acids and lycine; fast-growing varieties of soybeans and corn; better varieties of sunflowers, beans, and peas for protein; and grass seeds. The plan anticipates increased supplies of machinery, fertilizers, and other means of production, as well as more investment in irrigation.

In livestock production, an important objective of the current plan is increasing meat supplies, particularly beef. Priority is given to beef over pork, as conditions for cattle breeding are thought to be suitable in Czechoslovakia and because cattle consume less concentrated feeds. Expansion in poultry production also is anticipated. Annual growth rate of broiler production has been 20 percent in recent years. Pork's share of meat slaughter should stabilize at 47-48 percent of the total, while beef and poultry should gain.

In addition to increased domestic feed supplies, livestock-production goals are being sought by increasing feedlot operations, expanding mixed-feed and dry-fodder production, increasing use of protein meals, and importing breeding stock. In the livestock sector, prime attention will be focused on efficiency of production and reduced waste. It is hoped a saving of a million tons of feed grains yearly can be achieved through improved feeding methods. Support also is being given to developing processing industries in foods, meat, and dairy products.

Per-capita meat consumption of 84.6 kilograms is the second highest in the COMECON area, but the rate of increase is slowing. The government anticipates higher meat prices will produce gradual reduction in per-capita meat consumption to 81 kilograms by 1985. Consumption of milk and dairy products (excluding butter) by 1984 is anticipated to rise to 250 kilograms milk equivalent per-capita against 219 kilograms in 1978.

Future growth of U.S.-Czechoslovakian trade in agricultural commodities will be affected by:

- Availability of grains and oilseed meals from intra-COMECON sources;
- Competitiveness of U.S. products in price and quality with those supplied by other countries;
- Application of most-favored-nation treatment between the two countries;
- Access to U.S. credits;
- Amount of hard currency available; and
- Extent of Czechoslovak cattle-breeding programs.

U.S. corn exports will depend on corn production in Hungary and Romania and wheat production in Czechoslovakia. Czechoslovakia generally attempts to purchase her import needs from fellow COMECON countries, turning to Western suppliers only when necessary. She has a trade agreement with Hungary for shipment of 200,000 tons of Hungarian corn annually, to be compensated for in part by Czech exports of brewing barley and brewing technology.

Protein meal and oilseed imports into Czechoslovakia are expected to continue to expand from upgrading protein content of mixed feeds to meet additional requirements of the livestock sector. U.S. protein meals compete with Brazilian meals and, to some extent, with Indian oilseed meal, oilseed cakes, and Bulgarian soybean meal.

German Democratic Republic

Agricultural production remains a high priority in plan directives, due to its direct and substantial impact on the country's economy, consumer satisfaction, and foreign trade. The general goal for G.D.R. agriculture in the 1980's is to improve food availability for the population and increase raw materials for industry. In agriculture, as in industry, intensification and higher efficiency in production are relied on as the main forces of growth.

Increasing grain and fodder production has the highest priority. A government directive has set the 1985 grain-production target at 10.4 million tons, a rather modest goal, compared with the 1982 output of 9.9 million tons. This is to be achieved by raising yields to about 3.97 tons per hectare of cultivated land, compared with 3.74 tons per hectare in 1980-81. It still may be an ambitious goal, considering average yield has not improved much in the 1970's varying between 2.8 and 3.9 tons per hectare. Yields are expected to be raised by more optimum use of fertilizers and pesticides and by planting better varieties with higher yield potential. The area under grains is to increase to 2.6 million hectares by 1985.

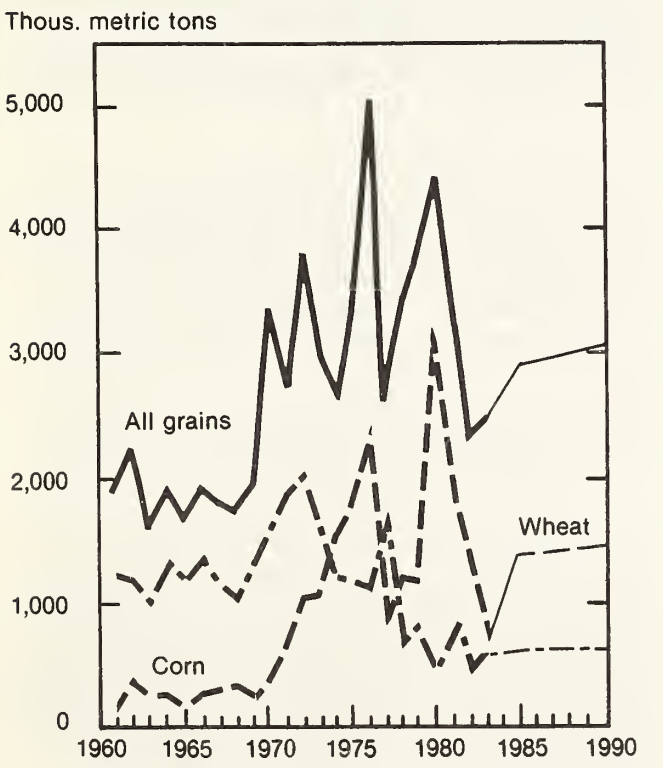
Increasing production of baking-quality wheat and rye is to be emphasized. The goal is to cover at least 75 percent of the country's baking-quality wheat requirements. Equal importance is attached to boosting production of animal feeds to allow a decrease in grain imports of a million tons below present levels by 1985.

Should G.D.R. succeed in attaining grain and livestock production plans, future grain-import requirements will decline, while protein-meal requirements will increase moderately over current levels. G.D.R. grain production will not catch up with domestic demand. As in the 1970's, grain imports may fluctuate considerably, depending on changes in domestic production. Volume of grain imports will likely decline from the 1978-82 annual average of 3.5 million tons.

Total net grain imports are projected to amount to 2.9 million metric tons by 1985 and 3.1 million metric tons by 1990. Corn will remain the principal feed-grain import, averaging about 1.4 million metric tons in 1985 and remaining so for the rest of the decade (fig. 14). Barley and sorghum will make up the bulk of other feed-grain imports.

Figure 14

German Democratic Republic Grain Imports, 1961-83 and Projections for 1985 and 1990



Future import demand for feed grains will continue to be affected by the size of potato crops, because a large percentage of the potato crop normally is fed as silage to swine and as roughage in beef rations. Feed-grain import needs may be reduced by the extent to which production of pelleted straw is increased. About 2 million tons of straw are processed annually by adding 2-3 percent urea.

Wheat imports depend on size and quality of domestic output. G.D.R. needs annually about 1.8 million tons of milling-quality wheat and 700,000 tons of milling rye to meet food requirements. Though G.D.R. is moving to less dependence on imported wheat, it is not able to produce all milling-quality wheat needed domestically. Future import requirements will likely approximate 650,000 tons, including some hard red wheat from the United States to upgrade the milling quality of domestic wheat.

Hog and cattle inventories may expand little, if any, in the 1981-85 plan period, and production growth is envisaged to come from introducing improved animal breeds and achieving greater feeding efficiency. Higher productivity became a central point of interest in livestock breeding and work has begun on developing an improved type of dual-purpose cattle. The improved cattle is a three-way crossbreed of Holstein-Friesian (50 percent), Jersey (25 percent), and German Friesian (25 percent). Reportedly, new crosses yield 20 percent higher than black-and-white cows in G.D.R.[24] Nonetheless, no significant growth in milk production is foreseen, because supply is now in excess of consumption. Broiler production is likely to be a growth sector in G.D.R.'s livestock economy. Only small increases in egg production are anticipated, because demand virtually is covered. Generally, there is ample scope for improving and balancing feed rations.

Consumption of livestock products is anticipated to grow slowly, and the main goal is to maintain self-sufficiency. Per-capit meat consumption apparently is intended to continue to rise from the present level of 87 kilograms, but specific targets have not been published so far.

A central feature of agrarian policy for achieving meat-production targets until 1981 was gradual adoption of industrial production methods in crop and livestock farming. Fattening pigs has rapidly become an industrial operation for large-scale installations. Plans were to increase the size of pig-fattening establishments to a capacity of 75,000-150,000 head. In 1980, about one-third of pigs for slaughter in G.D.R. came from such establishments. In the cattle sector, G.D.R. intended to set up cattle-replacement farms of 3,000 to 5,000 head each and beef-fattening units of 12,000 to 15,000 head

[24]U.S. Department of Agriculture, FAS, *Foreign Agriculture*, Vol. 17, No. 19, (October 1979), p. 20.

and to consolidate dairy operations into units of 2,000 cattle.[25] Since spring 1981, authorities have started to move away from large-scale, highly specialized agricultural units. In milk production, the emphasis apparently has shifted toward relatively small operations.

G.D.R. has been importing large and growing amounts of protein meals and cakes and a comparatively small tonnage of oilseeds. Oilseed imports have varied widely in recent years and generally trended downward. During 1971-81, oilseed-meal imports averaged 980,000 tons annually and oilseed imports, 57,000 tons. Soybean meals have grown steadily in importance and have accounted for as much as 90 percent of total meal imports in recent years.[26] The remaining oilseed meal is composed of groundnut meal, cottonseed meal, and sunflower-seed meal. In addition, G.D.R. traditionally has been a significant user of fish meal in livestock-feeding rations. Fishmeal imports, however, have been declining in recent years, due to scarcity and high prices.

G.D.R. is expected to remain a substantial importer of protein meals, particularly soybean meal, through the 1980's. Imports may range from the 1976-80 average of 924,000 tons to a projected 1 million metric tons by 1985, and 1.4 million metric tons by 1990 (fig. 15). Over the same period, imports of other oilseeds and oilseed meals may approximate 300,000 and 100,00 tons, respectively. G.D.R. can cover a third of vegetable oil requirements from domestic oilseeds. No change in this proportion is expected in the future.

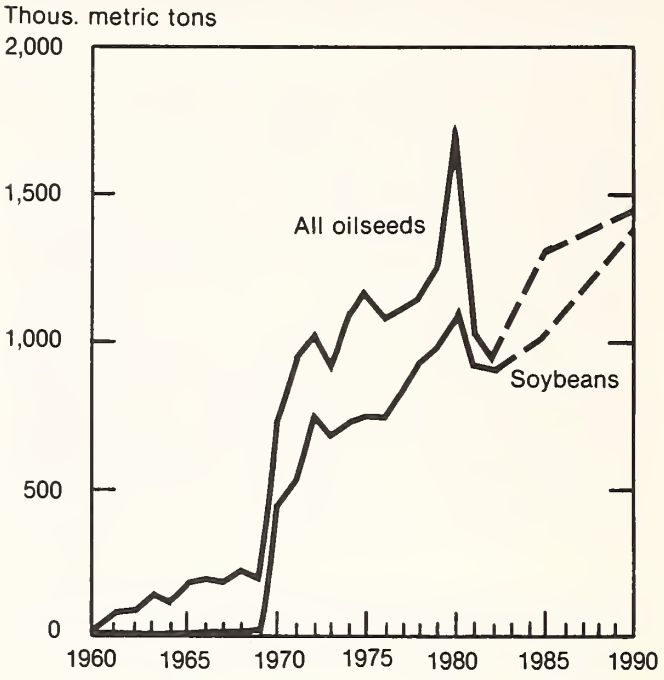
The United States provided almost half of G.D.R.'s total grain imports in the 1970's. It is not likely to retain its recent share, a third of G.D.R.'s wheat imports, and shipments will drop below present levels. Hungary is likely to remain the major wheat supplier, while U.S.S.R., Australia, Sweden, and Finland may continue as residual sources for wheat imports. The United States was the principal source for G.D.R.'s corn imports and is expected to retain this position in years to come. If so, the United States will, on average, cover about 90 percent of G.D.R.'s corn-import requirements, or some 1.1 million metric tons in 1985 and 1.2 million metric tons in 1990. Depending on availability, G.D.R. will purchase the balance of its requirements from Hungary and Romania. All G.D.R.'s barley imports will come from sources other than the United States.

The United Stated has been the major source of soybean-meal imports, supplying 26 to 47 percent of total imports during 1976-80.[27] Sizeble quantities (250,000 tons in 1979) of soybean meals were imported from West Germany under the Inter-German Trade Agreement. Most of this meal, however, was crushed in West Germany from imported American soybeans. Brazil was another major source of soybean meal for G.D.R. in some years, supplying nearly as much as the United States. Assuming the United States maintains her past share in G.D.R.'s soybean-meal market, U.S. exports may be in the range of 250,000-450,000 metric tons. The United States has supplied only a small share of G.D.R.'s oilseed imports and none of her vegetable-oil imports.

Two developments may contribute to expansion of U.S.-G.D.R. trade relations. The first is a private U.S.-G.D.R. Trade and Economic Council formed by U.S. business firms trading with G.D.R. U.S. members meet regularly with their G.D.R. counterparts to explore ways of expanding trade. The second development was ratification of a consular convention in December 1980 and pending agreements to open reciprocal offices and initiate scientific and technical cooperation arrangements.

Figure 15

German Democratic Republic Oilseed Imports, 1960-82, and Projections for 1985 and 1990[1]



[1]Units expressed in terms of soybean meal raw protein equivalents.

[25]Ibid.

[26]G.D.R. imported an estimated 910,000 tons of soybean meal in 1982.

[27]In 1982, the United States exported only 121,000 tons of soybean meal to G.D.R., representing only 13 percent of soybean meal imports.

Hungary

Hungary's agricultural production target is to grow 12-15 percent during the 1981-85 period to ensure further improvement in food supplies to the domestic market and to meet potential foreign demand. This is below the target 16-18 percent set in the previous 5-year period and may reflect the failure of agriculture to reach its past growth target.

The emphasis is on selective development, the most important branches being bread grains, feed grains, protein fodder, feedstuff processing, animal breeding, meat production, and food processing. Targets for grain are set at 14.7 million to 15.7 million tons by 1985, compared with 12.6 million tons in 1981 and 14.6 million tons in 1982, to cover domestic requirements for food grains and feed grains and to provide increased exportable surpluses. The increase in production is to be achieved through higher yields. Wheat yield per hectare is targeted to rise from the 1976-80 average of 4.06 tons to 4.5-4.8 tons, and corn yields from 4.9 tons to 5.5-5.7 tons. Indications are Hungary is not likely to achieve her grain-production target and actual output may be in the range of 14 million to 14.5 million tons. Despite intensified corn cultivation, Hungary will continue to grow wheat for feed, because soil and climatic conditions in some areas favor soft wheat over corn.

Plans call for expanding production of green fodder and hay through higher yields but on smaller acreage. Oilseed and animal-meal production is to be increased to slow growth of imports of various protein feeds.

The main means of achieving such increases in production seem to be better management, more effective use of production resources, and greater efficiency than in the past. Further encouragement will be given to developing large-scale production and strengthening cooperation among large-scale agricultural enterprises. More fertilizar and plant-protection chemicals will be made available for increasing yields.

Guidelines for livestock production for the coming years call for expansion of livestock inventories and product output, although few specific targets have been published so far. Emphasis is on production of slaughter animals, milk, poultry, and eggs. Beef production is to be increased to cover prospective growth in domestic consumption and maintain exports at least at their current level. Indications are Hungary has reached her dairy-herd upgrading goals, and current plans envisage improvements of beef herds. Milk production has been increasing, due to breeding improvements since 1972. Efforts will continue to raise the average milk yield per cow, now averaging 3,557 liters per year. Sheep breeding is slated to expand to take advantage of remunerative foreign markets.

Plans are to increase pork production to satisfy growth in consumption and to create export supplies approximating 75,000 to 80,000 tons in 1985. To raise production efficiency, Hungary is working to expand and modernize large-scale, industrial-type feeding operations. Moreover, support is to be given to small-scale pig and poultry production in the private sector. Poultry production for slaughter is to increase from 350,000 tons in 1981 to more than 500,000 tons by 1985, making possible an increase of 16 to 17 percent in home consumption and some 10 percent in exports. Hungary is the world's fourth largest poultry-meat exporter, following the Netherlands, the United States, and France. Poultry is expected to account for nearly one-fourth of total meal consumption. The trend in poultry production is also toward large-scale industrial complexes. Forecasts made in a study prepared by the Economic Commission for Europe suggest modest production increases anticipated for beef, pork, and cheese will go to satisfy growth in domestic demand.[28]

Unless Hungary is able to open new markets in Western Europe, the Middle East, and the COMECON area, livestock production will increase only moderately in the 1981-85 plan period. In this respect, much will depend on Hungary's ability to negotiate supply contracts with Russia. Market assurances would encourage the Hungarians to make additional large capital expenditures needed for expanding livestock production and processing facilities in excess of planned capacities. This expansion also would have implications for Hungary's trade in grain and oilseeds, because it would require greater quantities of both products.

Hungary is 80-90 percent self-sufficient is foodstuffs and has a surplus in the grain and meat trade. The country plans to step up agricultural exports by a third and cut down on imports to improve her overall trade balance, a deficit during most of the 1970's. Hungary's growing livestock industry used more than 9 million tons of grain in 1981, of which corn accounted for 6.3 million tons. Planned growth in production is expected to outpace domestic utilization, allowing Hungary to increase wheat and corn exports above 1980 levels of 800,000 and 83,000 tons, respectively. Hungarians used 40-52 percent of their wheat crop in the 1970's as livestock feed. Most of Hungary's grain exports go the Czechoslovakia, G.D.R., and the Soviet Union. Almost all wheat exports are shipped to other COMECON countries. Hungary also has a contract with the Soviet Union to deliver 300,000-400,000 tons of grain annually.

Hungary is not expected to import corn or wheat in the eighties, except sporadically, because she is a net exporter

[28]Economic Commission for Europe, Committee on Agricultural Problems, *Prospects of the Markets in the ECE Region for Meat, Milk, and Dairy Products and for Feedingstuffs Until 1985.* ECE/AGRI/47, (20 April 1979), pp. 19-28.

during normal crop years. Hungary is a regular importer of barley, however. The volume is affected by local supply conditions and price of barley relative to wheat. Hungary also imports small quantities of other feed grains. Total feed-grain imports amounted to an average of 244,000 metric tons from 1976 to 1980, and feed-grain imports other than corn are projected at 120,000 metric tons through the eighties.

Hungary has been importing 500,000-700,000 tons of oilseed meals annually since 1975. Despite plans for increased production of sunflower seeds and animal meals, Hungary's oilseed-meal import requirements are not expected to vary much from present levels. This is in accord with recent Hungarian policy statements expressing the intention of stabilizing annual oilseed-meal imports at the 1981 level of 570,000 tons. Hence, oilseed-meal imports are projected to reach about 630,000 metric tons in 1985, rising to about 800,000 tons by 1990 (fig. 16). Oilseed production is being held back by its lower profitability relative to that of grains.

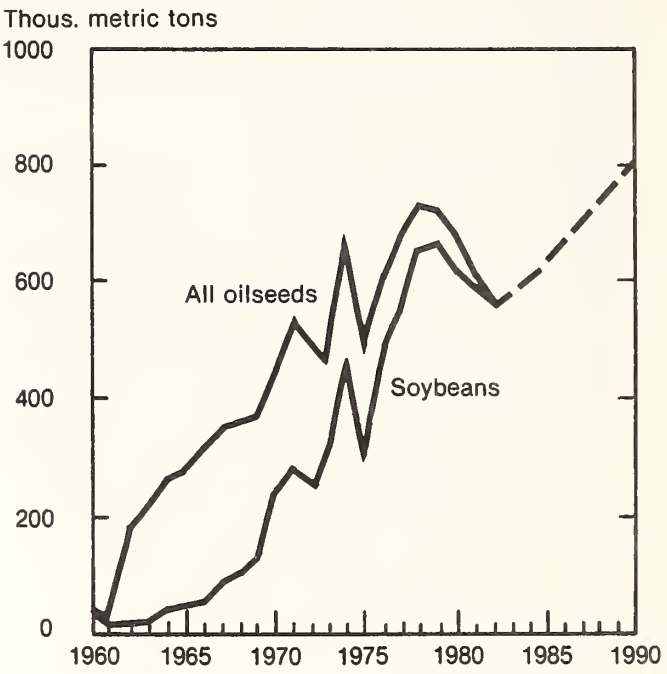
Hungary's preference for importing oilseed meals over oilseeds, notably soybeans, is due to lack of domestic demand for soybean oil. Hungary may be willing to enter a joint venture with a Western partner for setting up a soybean-crushing plant, if the Western partner would assume responsibility for disposing of the resulting oil. Hungary has been exporting growing amounts of sunflower seeds and sunflower-seed oil. Sunflower seed exports jumped to 138,000 tons in 1981, nearly double the 1980 volume. Exports go primarily to neighboring countries.

Hungary's exportable grain surpluses and oilseed-meal import requirements will hinge on future livestock-production levels. Growth in domestic consumption of meat and livestock products likely will be checked by price increases and a slowing in per-capita income growth. These factors also will affect exportable surpluses. Exports go primarily to neighboring countries. Hungary is one of Eastern Europe's larger meat, poultry, and cattle exporters. U.S.S.R. normally takes almost two-thirds of all Hungarian cattle exports, and the rest goes to Western Europe. Forty to sixty percent of poultry exports move to Western Europe and Japan, and the remainder to U.S.S.R., G.D.R., and Czechoslovakia. The United States is the main outlet for canned pork products.

Hungary provides the smallest Eastern European market for U.S farm products, having received just $7.1 million worth in 1982. Agricultural exports to Hungary are not expected to grow much above current levels, given the country's near self-sufficiency in foodstuffs. Oilseed meals, notably soybean meals, have been the leading U.S. farm exports, because Hungary is unable to cover needs from domestic production. Future sales opportunities, however, will depend on quality and price of U.S. soybeans relative to Brazilian meals.

Figure 16

Hungary Oilseed Imports, 1960-82, and Projections for 1985 and 1990[1]



[1]Units expressed in terms of soybean meal raw protein equivalents.

U.S.-Hungarian agricultural trade may increase as a result of a 5-year agreement signed May 1981. The agreement calls in general terms for expanded agricultural trade and a cooperative program of agricultural science and technology. Under the agreement, the United States and Hungary will consult regularly on their agricultural outlook and situation and on ways to expand trade between them. Also, the two countries will encourage universities, private research organizations, and cooperatives to develop programs to promote scientific and technical cooperation on plant production, animal husbandry, and related areas. The agreement also calls for increased joint research and exchange visits by agricultural reseachers, specialists, and scientific trainees.

Poland

Poland was the largest purchaser of U.S. agricultural products in Eastern Europe. Large imports of foodstuffs have impaired severely Poland's financial position. To counter this problem, the 1981-85 plan has given domestic production of food, especially crops, first priority. For the first half of the eighties, 30-33 percent of national investments were targeted for the

food economy. Originally, agricultural production was targeted to increase by 16 percent during 1981-85.

Crop production is to receive greater emphasis than livestock production to correct the imbalance between the sectors, which had moved in favor of livestock production. Thus, crop output is to rise by 19 percent and livestock production by 13 percent during 1981-85, which, if realized, will narrow the gap between feed supplies and requirements. Corresponding growth targets for the period 1976-80 were 20-23 percent for crops and 13-16 percent for livestock. For grain production, the original 1985 target was set at 25.5 million to 27.2 million tons, 0.8 million tons greater than the range set for 1980. Under the revised plan, grain production is forecast to reach 24 million tons. Poland's record grain harvest to date was 23 million tons, achieved in 1974-75. In 1981, grain production was 19.7 million tons harvested from an area of 7.9 million hectares.

To reach the 24-million-ton target, Poland must extend her grain area from 7.9 million hectares to 8.6 million to 8.7 million hectares and raise yields from 2.5 tons per hectare (1976-80 average) to 2.8 tons in 1985.[29] The area under grain would represent about 58 percent of the nation's arable land. Added acreage is to come mostly from land once used for cattle grazing, and potato and fodder production.

Livestock targets for 1980 were reset for 1985. Poor pasture conditions and feed shortage resulted in a 7.3-percent decline in total cattle population and a 10-percent decline in pig nunbers between 1979 and 1982. The heavy cutback in sow numbers of 15.3 percent will have long-lasting consequences. The poultry sector also has been affected badly by the poor harvest and limitation of corn imports after imposition of marshal law. On the basis of January 1, 1982 livestock inventories, achieving production targets would mean raising the number of cattle from 11.5 million to 15 million to 15.5 million and that of pigs from 19.05 million to 23 million to 23.5 million.

Actual meat output is targeted to reach 3.4 million tons by 1985, compared with 2.6 million tons in 1981. Whether Poland will be able to achieve these livestock and meat-production targets is questionable. The intended conversion of some land used for cattle grazing to grain production suggests a shift in meat production emphasis from beef to pork and poultry.

To promote fulfilling grain and livestock production targets, the Polish government made four far-reaching decisions on agriculture:

- Recognizing that private farming predominates structurally and making it an integral part of the socialist political system,

- Accepting the principle of flexible producer prices by adjusting them periodically to input cost,

- Turning state and collective farms into independent economic units freed from central plan directives,

- Increasing investment in the farm supply and food-processing industries.

The new policy direction toward private farming implies freezing the private/socialist farmland ratio (67:33). Also sale and purchase of land is to be freed from any restriction. Moreover, uncultivated land held by the State Land Fund was released to private farms.

Substantial increases were made in producer prices for main crops and livestock products as incentive for increased production. Prices will be adjusted periodically according to production costs to ensure profitability of individual products. A crucial factor in expanding crop production, particularly that of grain, is meeting agriculture's machinery and fertilizer needs. Until now, the Polish agricultural machine industry has been operating at less than capacity, due to limited supplies of raw materials, energy, and finance. It remains to be seen whether investment allocations to the industrial branches producing farm machinery and equipment will be sufficient to overcome bottlenecks.

The original plan called for an increase in fertilizer supplies to 250 kilograms per hectare by 1985, compared with 235 kilograms now. Fertilizer production is below capacity, due to scarcity of raw materials. Thus, fertilizer production or imports must be expanded if the usage target is to be attained.

In the livestock industry, improving feeding efficiencies ranks as top priority for the current plan period. Inefficiencies are due to unsatisfactory feed management and unbalanced rations. Poor management is attributed to lack of appropriate technical equipment to collect and store feeds, which results in losses in nutritive values. Low feeding effieiencies are ascribed to insufficient protein content of feeds, causing substantial waste of energy substances, particularly grain. The amount of grain concentrate in feeds could be reduced and replaced to a large extent by high-protein concentrates.

Polish planners would like to reduce grain and protein-feed imports in the 1980's to 4 million to 5 million metric tons per year, consisting of products that cannot be produced at home for climatic reasons. This would include about a million metric

[29]Part of the increase in average yield is expected to come from a shift from rye and oats to higher yielding wheat, barley, and a rye-wheat mix known a triticale. Other yield targets include oilseeds, 2.1 to 2.3 tons per hectare (1.9 tons per hectare in 1976-80) and potatoes, 22 to 23 tons per hectare (18 tons per hectare in 1976-80).

tons of protein feeds, with the balance being made up of wheat, barley, sorghum, and corn. These targets are extremely ambitious in light of actual import requirements in recent years. Imports of grains and protein-feed products in 1976-80 averaged nearly 8 million tons per year, and grain imports alone reached 7.2 million tons in 1981.

Level of imports projected is down from that of recent years, but not to the extent suggested by the objectives sought by Polish planning authorities (figs. 17 and 18). Total grain imports are projected to average about 5.8 million metric tons in the eighties, with about 1.9 million metric tons of corn, 2.5 million of wheat, and the balance in other feed grains. Imports of oilseeds are projected to consist primarily of soybeans and soybean meal. Soybean imports are projected to increase from an average of 936,000 metric tons in the second half of the seventies, to 947,000 metric tons in 1985, and 1.073 million metric tons by 1990. In view of past variability of Poland's production, individual-year imports are likely to vary considerably around this average. Besides domestic grain and rapeseed production, volume of imports will be affected by size of fodder and potato crops. Potato output is important in that potatoes comprise about 40 percent of pig rations.

Assuming U.S. share of Poland's grain imports in the future returns to the 1975-79 level, U.S. exports of wheat may be in the range of 300,000-750,000 tons and that of corn in the range of 1.9 million to 2.2 million tons. U.S. oilseed-meal exports could amount to 480,000-650,000 tons.

U.S. exports will, to an important degree, be affected by availability of Commodity Credit Corporation credit programs; U.S. willingness to enter into a new grain-trade understanding, providing for annual supply of specific volumes of grain; and U.S. willingness to engage in countertrade deals. Poland was a major user of CCC credit programs for farm-commodity imports from the United States, taking $596 million in fiscal year 1981. Purchases under CCC financial programs included grains, protein meal, soybeans, cotton, vegetable oils, isolates, and other products.

FOREIGN TRADE SYSTEM AND DISTRIBUTION STRUCTURE

General Description

The foreign-trade system and distribution structure of a centrally planned economy are considerably different from

Figure 17

Poland Grain Imports, 1961-83, and Projections for 1985 and 1990

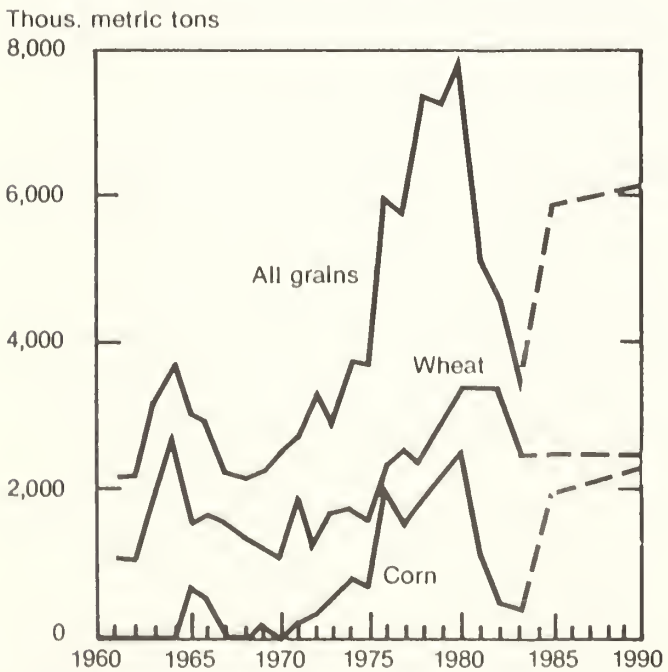
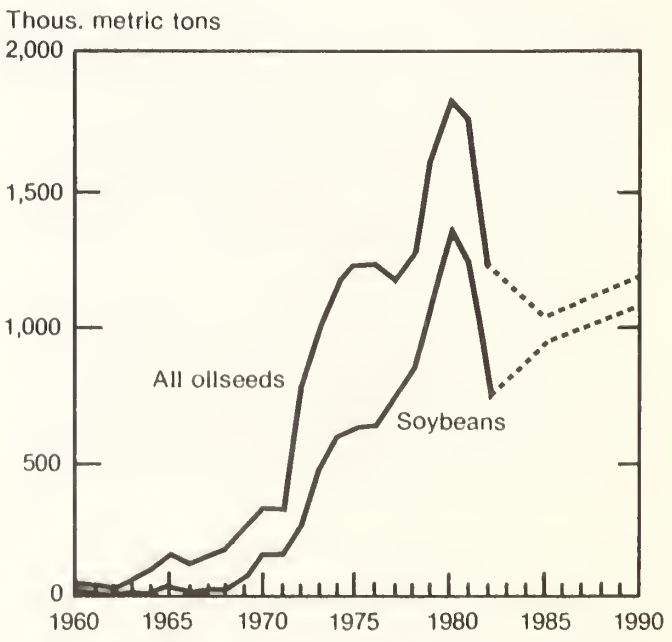


Figure 18

Poland Oilseed Imports, 1960-82, and Projections for 1985 and 1990[1]



[1]Units expressed in terms of soybean meal raw protein equivalents.

those of a market economy. The system was devised initially in U.S.S.R. and later adopted by other Communist Bloc countries. This foreign-trade system is coupled with the common denominator for all these economies—subordinating import decisions to the needs of central planning and tenets of socialist government.[30] Foreign trade in centrally planned economies is done by state-controlled trading organizations, which are state monopolies.

In the upper level political-selection process in a centrally planned economy, the Party Presidium is selected from the Central Committee, which comes from the Party Congress (fig. 19). Planning authority for the country rests with the Party Presidium. Responsibility for refining and implementing plans goes to the Council of Ministers and on to the various ministries and their agencies.

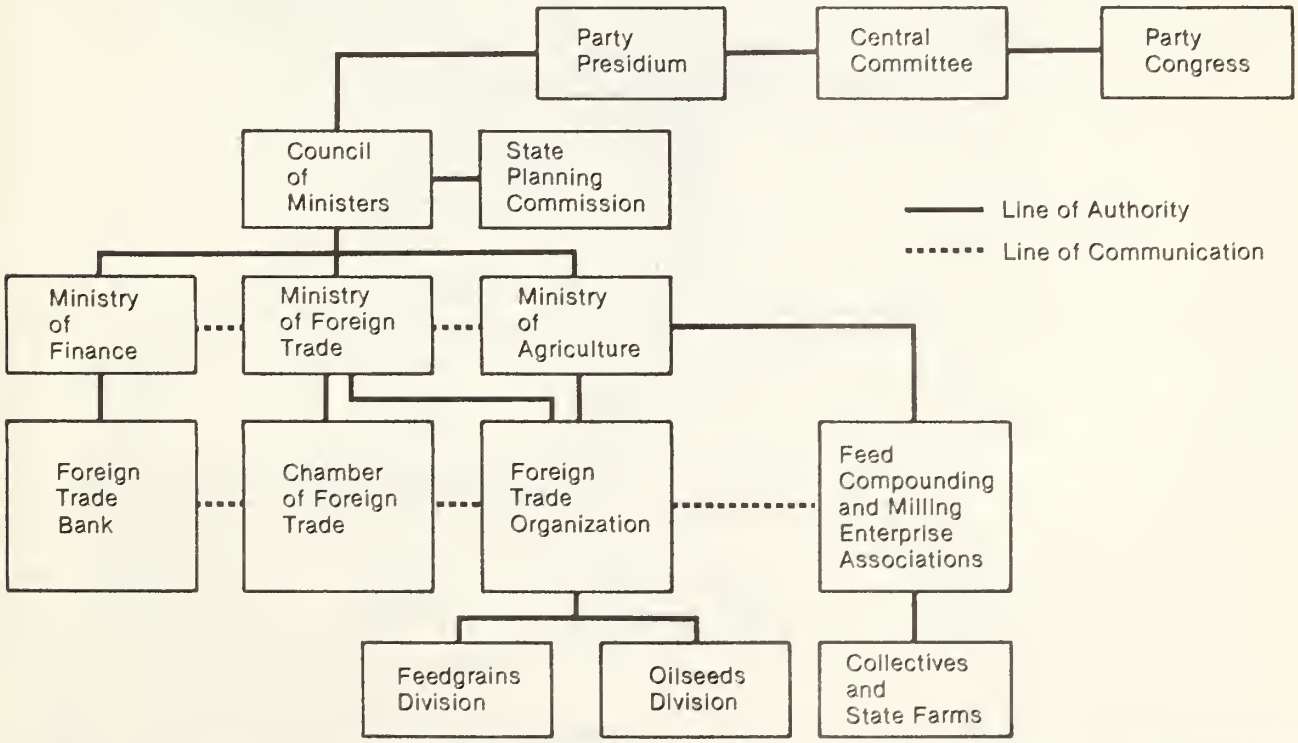
The general model of import planning has information flowing from the Party Presidium down to the lowest-level production agency, and then back up again. Several transfers of information from top to bottom and vice versa are made in estimating agricultural production capability and subsequent foreign-trade needs. Lower state enterprises, including state farms, cooperatives, and privately held units, have input by registering their resource needs in the production process. These needs are accumulated by the Ministry of Agriculture and Food and evaluated in terms of achieving goals set by the Party Presidium.

When the resource base is not sufficient to produce the agricultural commodities needed for providing all food requirements, plans call for importing commodities to meet the deficit. This now involves not only the Ministry of Agriculture and Food but also the Ministries of Trade and Finance. Import needs are sent to the Party Presidium for their approval and may be revised subsequently, depending on national policy considerations. Import needs then are approved for the ministries, and foreign trade organizations (FTO) are directed to secure those imports. The planning process is flexible enough to allow for shortfalls in production, due to weather perhaps, so additional imports can be purchased to meet the needs of the agricultural sector.

[30]Some of the material for this chapter has come from the paper by James R. Jones, "Import Decision Processes in the Centrally Planned Economies," (Moscow, Idaho; Univeristy of Idaho, 1979).

Figure 19

Foreign Trade Structure of a Centrally Planned Economy



Conduct of Foreign Trade

Although the general trading structure is similar for the four countries studied, each country has some unique problems and customs in trading. Being aware of these unique characteristics can improve cooperatives' marketing programs for each country.

Czechoslovakia

Figure 20 shows the agricultural-import structure in Czechoslovakia. The central-planning process follows the general model described earlier. Czechoslovakia does not have most-favored-nation status with the United States, putting it at a trade disadvantage. Czechoslovakia's general trade policy is to buy from COMECON countries whenever possible. She also trades with countries under bilateral trade agreements and under financial agreements not requiring hard currency to purchase imports.

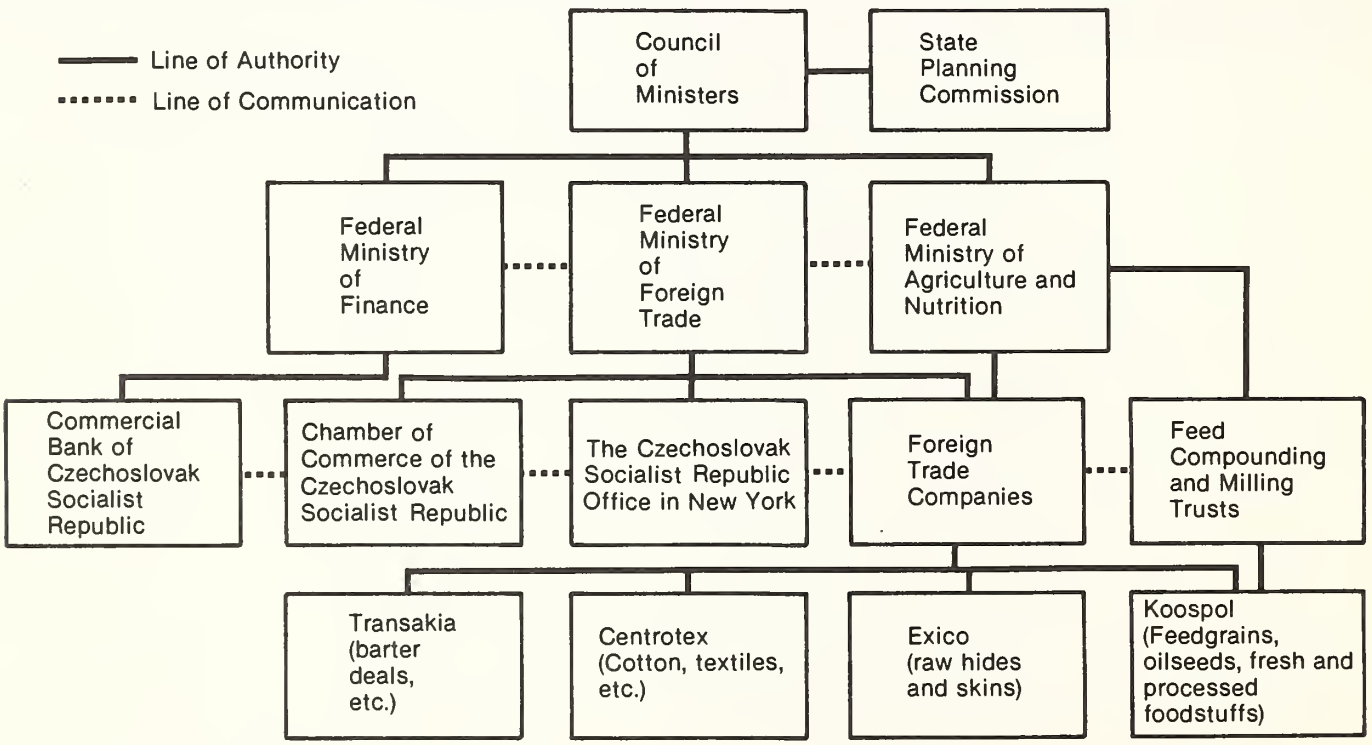
Koospol is the foreign trade organization responsible for imports of grains and oilseeds. It is an independent, autonomous state enterprise that makes its own agreements with suppliers and decides whether to use credit in consultation with the central bank. Koospol officials operate on a commission basis by commodity. It has exclusive import rights for both Czech and Slovak lands.

In planning for and purchasing imports, information is exchanged continually among the Ministry of Foreign Trade, the Ministry of Agriculture, the Ministry of Finance, and the Central Planning Commission. The authority for import plans rests with the Office of Prime Minister, advised by the Central Planning Commission. The Ministry of Foreign Trade has oversight approval on country of origin, while Koospol is given the responsibility for purchasing imports.

Bids for grains and oilseed products generally are requested at a flat price. Koospol does some futures pricing but indicated it does not use the futures market on the Chicago Board of

Figure 20

Agricultural Import Structure in the Czechoslovak Socialist Republic*



*As applied to agricultural import decisions.

SOURCE: Chamber of Commerce of Czechoslovak Socialist Republic, *Your Trade Partners in Czechoslovak Socialist Republic*, 1978, plus personal interviews with trade and industry officials.

Trade. Officials indicated they do not hedge prices to lock in cost of feed ingredients.

Grain and oilseed products usually are purchased cost and freight (c.&f.) Hamburg, and then either shipped by barge on the Elbe River or overland by rail. Some shipments come through Odessa on a c.&f. bid, or on Soviet ships as a result of free on board (f.o.b.) U.S. Gulf port bids.

Under the Ministry of Agriculture and Nutritution is the Central Agency for Purchasing and Supply of Agricultural Products (CAPS). There is a seperate agency for Czech and for Slovak lands. CAPS is the enterprise that coordinates grain and soybean-meal handling with Koospol and end users. CAPS specifies minimum needs a year in advance to avoid interrupting the feed-production schedule. Then quarterly, CAPS discusses needs for grains and soybean meal with Koospol. Koospol does not have the authority to substitute one feed ingredient for another, if there is a relative price change in ingredients. Only CAPS has the authority to specify exactly what is needed. Grain and soybean meal are considered strategic commodities and can be imported, regardless of the world price level.

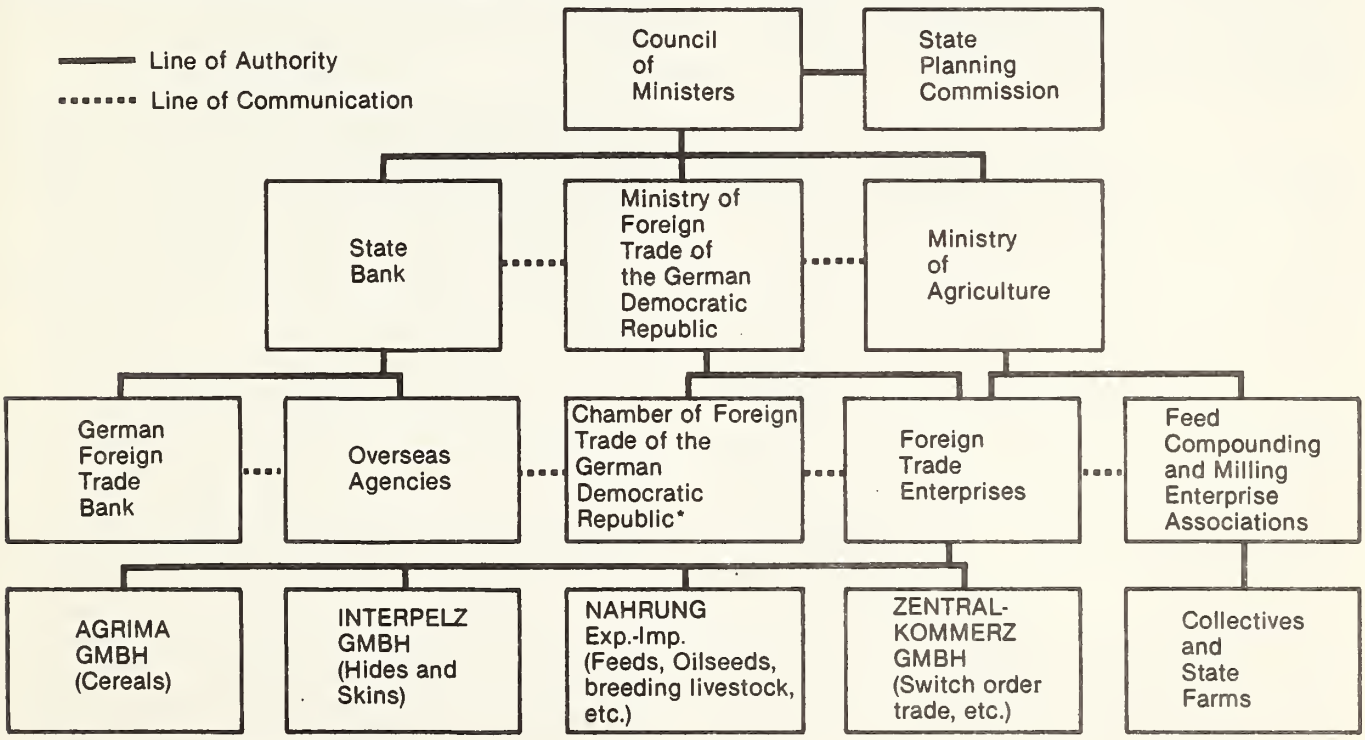
German Democratic Republic

Structure of agricultural import decisionmaking in G.D.R. is similar to that of other Eastern European countries but appears to be more clearly organized than in other countries (fig. 21). G.D.R. does not have most favored nation status. If prefers to trade with other Eastern European countries for hard-currency considerations and security reasons. It does not wish to depend on the West for strategic goods. In addition, G.D.R. emphasizes countertrade in dealing with the West.

Central planning involves the State Planning Commission, which sets plans for the country. The Ministry of Agriculture prepares balance sheets on domestic production and feed requirements and gives this information to the State Planning Commission. The difference in production and disappearance

Figure 21

Agricultural Import Structure in the German Democratic Republic*



*As applied to agricultural import decisions.

Sources: Chamber of Foreign Trade of the German Democratic Republic, *German Democratic Republic Foreign Trade*, 1977 and personal interviews with trade and industry personnel in the German Democratic Republic.

then are met by imports. All figures go before the Party Presidium (not shown but similar to that shown in fig. 20) which gives final approval. Agricultural imports are determined by the Ministries of Agriculture, Finance, and Foreign Trade; the State Planning Commission; and the Council of Ministries. A foreign trade organization, Nahrung, buys imports for the country's needs.

Nahrung is under the Ministry of Agriculture and works closely with the Ministry of Foreign Trade. In carrying out trade responsibilities, Nahrung considers the commercial-political situation with other countries. Trade also depends on any bilaterial agreements G.D.R. may have with other countries. Nahrung does not engage in countertrade itself but is in a position to support countertrade deals with other FTO's.

G.D.R. also has a Chamber of Foreign Trade, which provides a state agent to represent foreign sellers to the appropriate foreign trade enterprise. A new firm trying to sell agricultural commodities to Nahrung would be asked to have a state agent represent it in dealings with Nahrung. The state agent would be an official of Agrima GmbH, and the agency would charge a commission. It was suggested that a new firm wishing to make sales should contact both Nahrung and Agrima. Once a firm had established itself as a reliable and competitive supplier, it could deal directly with Nahrung. Firms selling bulk, undifferentiated products that usually are purchased from the lowest bidder may not necessarily be required to establish this agency relationship.

Price bids are made to Nahrung, which then often makes counterbids. It compares bids of various sellers. Nahrung does not buy f.o.b., because it is not ready to bear the risks. It buys delivered (c.i.f.), usually through Hamburg or Rostock ports. Rostock is a major port, which loads 25- and 50-metric-ton hopper cars for transport to district storage points. Elevators in the districts have about 100,000-metric-ton capacity, and usually are associated with a compound-feed-production unit.

A new grain-receiving facility was completed at Rostock in October 1982. Annual receiving capacity at this facility is estimated at more than 4 million metric tons. Storage capacity is 96,000 metric tons. This facility is expected to eliminate the need for transhipments through Hamburg and may allow for some transhipments destined for Czechoslovakia and Hungary.

Zentral Kommerz is another foreign trade organization under the Ministry of Foreign Trade and operates independently of Nahrung. Larger grain sales are done with Nahrung, while smaller ones can go through Zentral Kommerz. Some sources suggested 80 percent of corn imports are handled by Nahrung and 20 percent by Zentral Kommerz. Zentral Kommerz handles no soybean meal, while Nahrung does. Both Nahrung and Zentral Kommerz supply the Cereal Processing Organization. Zentral Kommerz imports grain primarily of U.S. origin and buys c.i.f. through Hamburg.

The Cereal Processing Organization has mills and warehouses for further handling and processing of grain and soybean meal. End users have no incentive to show a preference for either an imported or a domestically supplied grain or soybean product. They provide no input into purchasing grain and oilseed products from foreign buyers.

Hungary

Foreign trade in Hungary is similar to that in other centrally planned countries. The Party Presidium sets goals for the various sectors of the economy and passes them down to the Council of Ministers (fig. 22). The Ministry of Agriculture and Food is responsible for achieving agricultural goals. It assesses its resource base for producing agricultural commodities and the food needed by the population. If there is a need for imports, it works with the Ministry of Foreign Trade and the Ministry of Finance in directing foreign trade organizations in the quantity and type of commodity to import. Hungary's policy is to trade first with other COMECON countries where currencies can be exchanged. In addition, if Hungary has a positive foreign exchange balance with another country, either in hard or soft currency, it tries to trade with that country.

The Grain Trust is a central government enterprise responsible for buying, handling, and facilitating processing of domestic grain from Hungarian cooperatives. Half the grain crop goes through the Grain Trust. Half the compound feed milling also is done by the Grain Trust, while the other half is done by state farms and cooperatives. Depending on the agricultural and food production goals specified by the 5- and 1- year plans, the Grain Trust and the Central Agency for State Farms take direction from the Ministry of Agriculture and Food on the quantity of grains and oilseeds to import. They then direct Agrimpex, the foreign trade organization responsible for grain and oilseed imports, to import a specific quantity and quality to meet feed-milling requirements. Eighty percent of import requests come from the Grain Trust and 20 percent from the Central Agency for State Farms. Agrimpex decides source of grains and oilseeds, price, and, within limits, when to purchase from suppliers.

Agrimpex purchases through the major grain companies and reported it has been importing soybean meal and pellets from Brazil because of better price and quality. The United States has supplied 10 to 20 percent of Hungary's oilseed imports in recent years, but none in 1981. Pricing imports is done under various methods. Agrimpex buys flat price, premium c.i.f. (price to be set later on basis pricing), and also uses the futures market. Ninety percent of its purchases are c.i.f. bids

to Yugoslav ports, usually in 20,000-30,000-ton lots. It has forwarding agents in Yugoslav ports, who deliver grain and soybean meal to end users. Agrimpex can buy a year in advance and under some circumstances, can buy further in advance. Agrimpex reported it carries about 2 months of soybean meal in its inventory.

End users cannot bypass Agrimpex in importing grains and oilseeds. The end user can request, with support of the Ministry of Agriculture, that a product be imported from a particular source. Agrimpex has final choice in determining source of needed imports. State farms needing grain and oilseed imports buy from the Grain Trust, not Agrimpex, though this relationship is changing to allow some state farms to have state enterprises that can buy directly from Agrimpex.

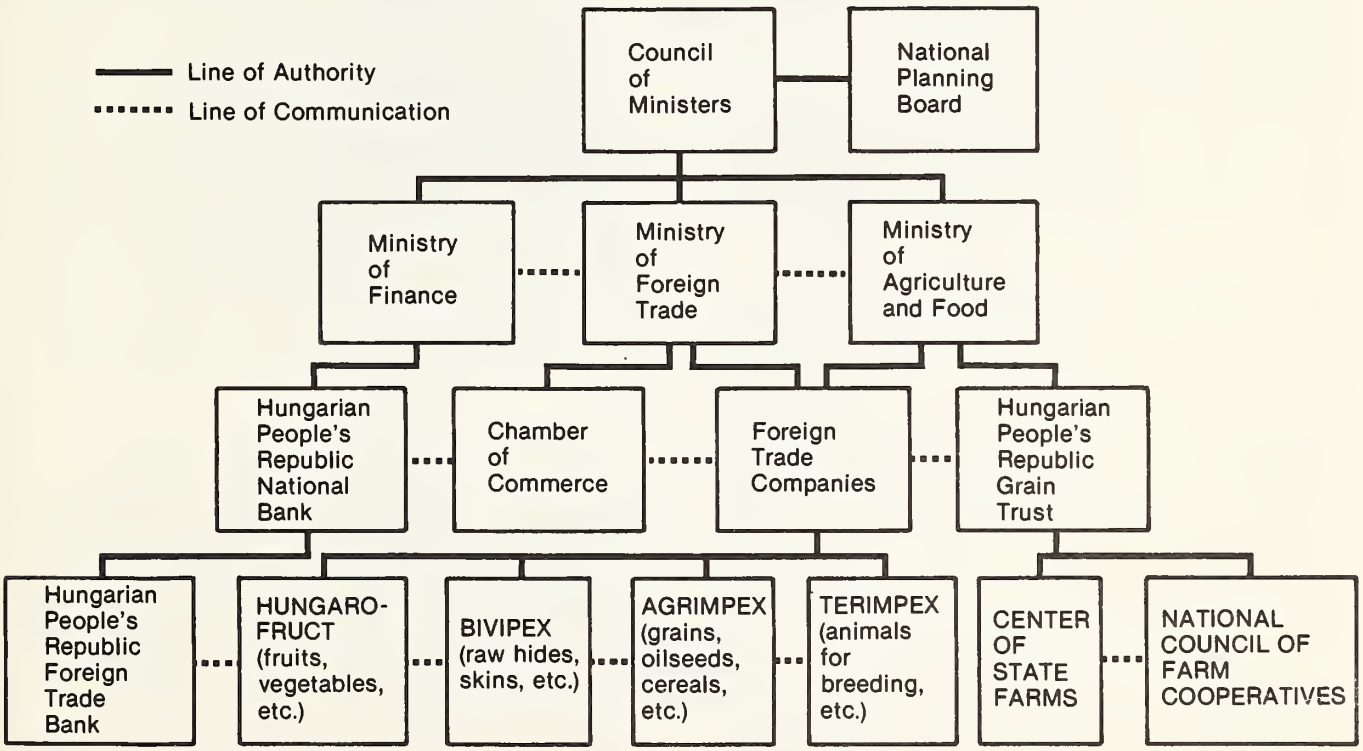
Poland

The organization for decisionmaking and the foreign trade structure of Poland is shown in fig. 23. The Party Presidium specifies general goals and passes them down to the Council of Ministers. The council's responsibility is to develop specific plans for agriculture and identify the productive capability of Poland, along with the need for any imports. The Ministry of Agriculture determines how to achieve agricultural production goals and allocates appropriate resources. Imports of grains and oilseeds are included in its annual plans.

Bacutil is the state enterprise responsible for feed milling in the Ministry of Food Industry and Purchase. Bacutil coordinates with the Ministry of Agriculture in assessing the needs for feed milling, making up deficiencies from grain and oilseed imports. Once quantity and timing of import requirements have been determined, the Ministry of Agriculture, coordinating with the Ministry of Foreign Trade, directs the foreign trade organization, Rolimpex, on import needs. Rolimpex has the autonomous responsibility to determine when, where, and at what price to buy. Rolimpex is responsible for quality inspections of grains and oilseeds. The Ministry of Finance is sanctioned to make Rolimpex and Bacutil responsible for poor-quality imports.

Figure 22

Agricultural Import Structure in the Hungarian People's Republic*



*As applied to agricultural import decisions.

Sources: Hungarian People's Republic Chamber of Commerce, *Directory of Hungarian People's Republic Foreign Trade Companies*, Budapest, 1977; *Business Guide Hungary*, Budapest, 1977 and personal interviews with government and trade officials.

In addition to the Ministry of Foreign Trade, the Ministry of Finance must approve import needs for agriculture and allocate currencies to make purchases. Centrally planned countries prefer to trade with other COMECON countries, because they do not require hard currencies. Poland then looks at its clearing account countries, Brazil and Argentina, for example, and tries to manage trade, so imports and exports will be equal on an annual basis. But most purchases of grains and oilseeds come from countries that have hard currencies. The Ministry of Finance, out of necessity, must allocate any currency needs to the foreign trade organization.

The relationship between end users and Rolimpex is carried out through Bacutil. Bacutil is in contact with end users of feedstuffs who are represented by the Union of Oilseed Crushers and the Union of Compound Feed Organizations, part of the cooperative system. Bacutil gets requests for feed and oilseed needs from these organizations. It sends the information through the Ministry of Food Industry and Purchase and the Ministry of Agriculture, which, coordinating with the Ministry of Foreign Trade, directs Rolimpex to import needed commodities.

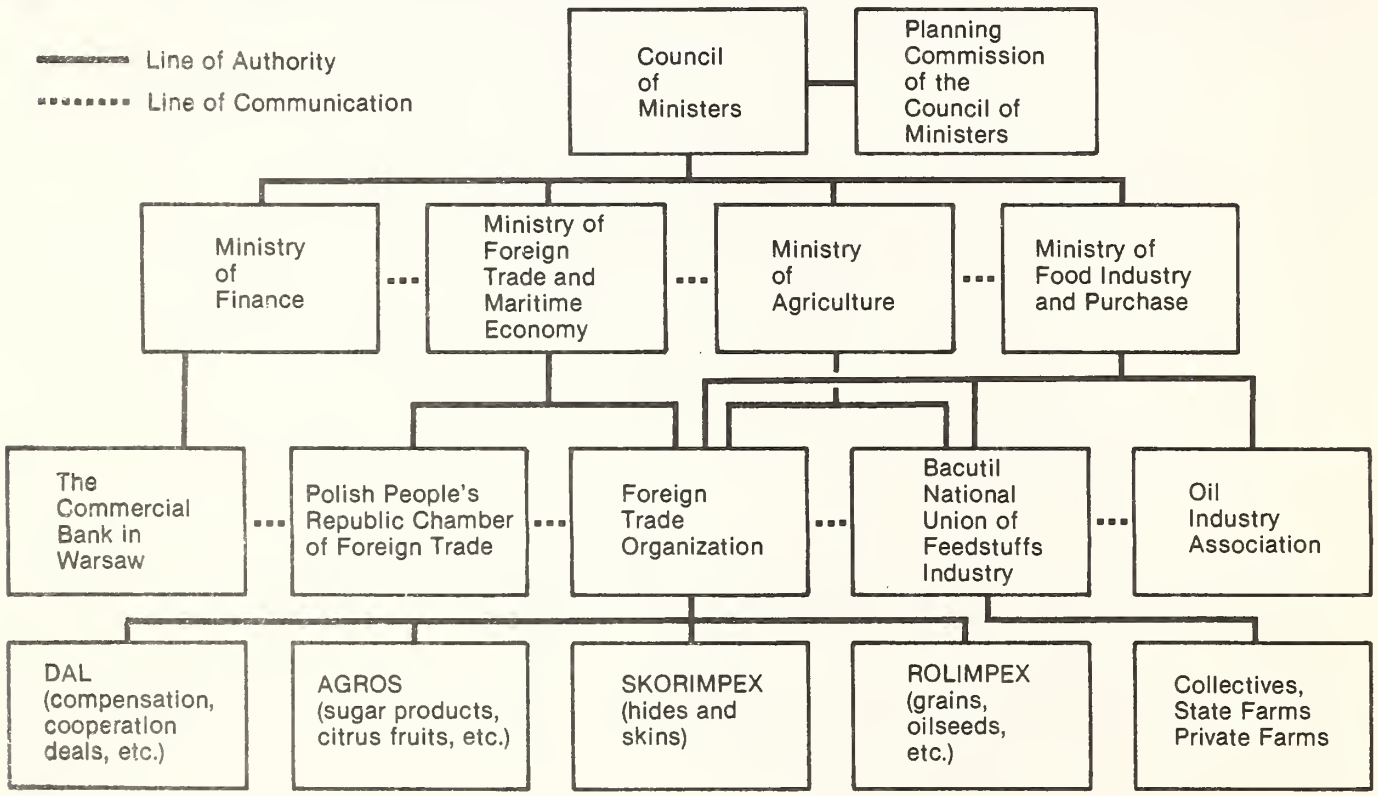
If Rolimpex finds a favorable price relationship between grains and oilseeds, it requests Bacutil to alter the imports of these commodities. Bacutil then checks its feed formulations and needs of end users to see if altering import requirements is feasible. Otherwise, the end user in Poland has no control or influence over price, terms of payment, origin, or other factors in purchasing commodity imports.

Organization of Assembly, Processing, and Distribution

Organization of assembly, processing, and distribution in Eastern European countries is designed for State enterprises and cooperatives to carry out. Assembly of grain and oilseeds from the farm or cooperative to the first-handler level may be by a state enterprise for transport or by the farm itself. Further

Figure 23

Agricultural Import Structure in the Polish People's Republic*



*As applied to agricultural import decisions.

Source: Compiled from interviews with trade and industry officials in the Polish People's Republic.

assembly can take place from the first handler to a processor or distributor. State enterprises process agricultural commodities into a comsumable product. Grain and oilseed products are milled into feedstuffs for animal consumption. In most countries, feedstuffs are distributed back to the farm level for animal consumption. Grain surpluses usually are exported.

The four Eastern European countries each have a different structure for assembly, processing, and distribution. In some countries, these functions are decentralized, while in others they are highly centralized, depending, in part, on the structure of agriculture itself.[31]

Czechoslovakia

Domestic production of feed grains was 5.3 million tons in 1980, two-thirds of it barley. About 184,000 metric tons of protein meal are produced annually, two-thirds of it rapeseed meal. Czechoslovakia imports both protein meal and feed grains.

Government officials reported Czechoslovakia hopes to increase the amount of grain fed to dairy cattle and improve the quality of hog and poultry rations. Seven to eight million metric tons of grain are used in feed each year.

The Central Agency for Purchasing and Supply (CAPS) performs four tasks; purchase and distribution of grains, production of component feeds, supply of production inputs, and purchase of miscellaneous crops and materials mainly used by the feed industry. CAPS serves the Czech lands, which cover two-third of the country, and another enterprise serves Slovak lands. Their foremost tasks are administering purchase and distribution of grains, including handling and storing. They also advise agricultural producers how to produce to achieve the best quality and provide assistance for achieving a timely harvest and minimizing losses after harvest. CAPS must accept all grain produced at a given state price.

A second responsibility for CAPS is feed milling. Eighty percent of the grain it purchases is used for feed mixes. Mills produce regular feeds for a geographic area and may produce special feeds for farms outside the milling area. Feed prices are fixed. CAPS is responsible for developing feed mixes each year, based on supply and demand for various ingredients. Any feed ingredient domestically unavailable is supplied from imports, and CAPS has the authority to specify exactly what is needed from Koospol, the foreign trade organization for agricultural imports. Czechoslovakia does not have a large soybean-crushing capacity and must import proetin meals.

The third responsibility for CAPS is supplying farm inputs. In addition to feed, it distributes fertilizer, chemicals, and other inputs except machinery.

The fourth responsibility is purchasing oleaginous plants, legumes, and other grain crops; fodder; potatoes; hay; straw; and wool. These purchases are made primarily for the needs of the feed industry on behalf of organizations that cannot buy them directly from agricultural enterprises.

German Democratic Republic

Grain production averaged 9 million metric tons during 1976-80 and sometimes approaches 10 million metric tons under favorable conditions. Protein-meal production was a high of 169,000 metric tons in 1980, more than 80 percent rapeseed. Total grain consumption in 1981 was 13.7 million tons, roughly a third supplied by imports, mainly feed grains.

Agricultural cooperatives are separated into crop-production and livestock-production units, and each may participate in horizontally and vertically integrated units.

Feed is obtained by delivering grain to state feed mills on a grain-bank type of contract. The cooperative then receives finished feed mixed according to standard formulas. The government enforces standards for feed mixes produced in feed mills. Feed norms have been established for livestock of each type and at each stage of development.

Ninety-two feed mills produce mixed feed in G.D.R. Fifty-seven are stated owned, while 35 belong to cooperative organizations. Using 54 ingredients, these plants produce 30 feeds. Sixty-four percent of the ingredients are grains; 22 percent, animal or vegetable protein; and the remainder, mill feeds, minerals, vitamins, etc. State-owned mills produce 90 percent of mixed feeds, and a large majority of deliveries are in bulk. Mixed feed production for 1980 was estimated at 8.2 million metric tons. The five largest mills produce more than 200,000 metric tons a year, eight mills are in the 150,000 to 200,000-metric-ton range and five mills have a 100,000 to 150,000-metric-ton capacity. In 1979, plans were to open five new mills with a capacity of 270,000 metric tons each.

The mixed-feed industry is insulated from world price fluctuations, because the state fixes mixing regulations, feeding norms, and internal prices, independent of world market prices. When questioned about the relative efficiency of this system, G.D.R. officials viewed the advantage of stable prices, a guaranteed market, and ability to determine profits

[31]Structure, organization, resource allocation, and decisionmaking at the production level in agriculture are described in more detail in Appendix 2.

and costs in advance as facilitating planning. They implied this better planning was more valuable than the advantages of least-cost feed systems.

Hungary

Hungary produced 12.6 million tons of grain in 1981 of which 8.9 million tons were fed to livestock. The mix contained 2.4 million tons of wheat and 6.5 million tons of feed grains, principally corn.

Each cooperative and farm has enough storage for assembling grain it has produced. Grain is sold to the Grain Trust, fed on farms or cooperatives where produced, or distributed from surplus to deficit cooperatives. The Grain Trust is responsible for buying, handling, and helping process grain from cooperatives, state farms, and small holdings. If the Grain Trust does not have enough storage, it buys grain and stores it on farms, paying for the storage cost. Typically, the Grain Trust will buy surplus grain production and deliver it to deficit farms to feed animals. Farmers also can buy from the Grain Trust to feed their privately owned cattle, hogs, and poultry. Half the grain crop goes through the Grain Trust, and the other is fed on farms where produced.

Annual mixed feed output of about 6 million to 7 million metric tons is divided into three sectors. The Grain Trust mills a third of total feed in Hungary; grain cooperatives, a third; and state farms, the final third. State enterprises purchase 1.5 million to 2 million tons, and trade among agricultural units amounts to 500,000 tons. Any feed a state farm does not mill is bought from the Grain Trust.

Poland

In 1981, about 16 million tons of grain were used for animal feeding and about 9 million tons for human consumption, seed, and industrial purposes. Some 2.4 million tons of wheat were fed to livestock.

Assembly is carried out through voluntary contracts between farmers and their cooperatives, which purchase their farm products. Private farmers deliver 70 percent of production to cooperatives, which then send it on for processing or further distribution. Local cooperatives can ship to feed mills, other cooperatives, or other grain users. This function is handled by the Union of Grain Industry, responsible for transporting, drying, and storing grain. UGI has access to transportation facilities and is concentrated in production areas.

Total feed-milling capacity is 11 million metric tons, with actual feed production of 6.8 million metric tons in 1979. Compounded feeds comprised 5.7 million metric tons and concentrates, milk replacers, and so forth, 1.1 million metric tons.

Feed milling is divided among three state organizations: Bacutil, the Central Association of Agricultural Cooperatives, and State Farms. Bacutil, also called the Feed Industries Association, is under the Ministry of Food Industry and Purchase (MFIP). The Central Association of Agricultural Cooperatives is under the Co-op Board, an agency with ministerial status. State Farms are under the Ministry of Agriculture. In addition to feed milling, MFIP controls oilseed crushing, flour milling, and meat and poultry processing. Some minor feed and food processing is subordinated to other state organizations.

Bacutil mills 40 percent of all feed in Poland, while cooperatives and state farms split the remaining 60 percent. Feed from Bacutil and cooperative mills is distributed through cooperatives back to the producer. In 1979, Bacutil produced a million metric tons of feed concentrates. It plans to produce 2.5 million metric tons by 1985. This increased production of feed concentrates would be delivered to local mills for decentralized production of feedstuffs.

MFIP and Bacutil are responsible for base mixes, feed ingredients, and production control at feed mills for all agricultural products processed into feed.

MARKETING ALTERNATIVES FOR FARMER COOPERATIVES

Centralized economic planning systems of Eastern European countries present some unique business situations for those attempting to trade there. Some transactions can become rather complex and may require the services of specialists in East-West trade. Once the exporter becomes familiar with specialized conditions in these countries, however, most sales are no more difficult than those to noncentrally planned countries.

The unwieldly state monopoly trade model inherited from the Soviets has been modified to meet the particular situation of each country. While the overall appearance of state planning and importing sectors is similar, many details to be mastered in executing trades are different for each country.

The almost complete government control over the econony generates some special considerations traders should be familiar with. In most cases, companies in these countries that import or export are granted a monopoly for the entire country. Being a state monopoly trader can vest substantial purchasing or selling authority in a few individuals. Mistakes in sales or procurement can have enormous consequences for the entire economy, at times even leading to political reactions. Cooperatives wishing to export to Eastern European countries will need to select marketing techniques

addressing traders' concerns and matching specific country requirements perceived by the purchasing agency.

Presence In the Market

Because of the importance of grain imports in most countries and rather large annual purchases, import FTO's prefer to deal with suppliers with an established presence in the market. Such a presence means an exporter can provide desired commodities in the proper quantity and of the preferred quality, along with related services, and can assure performance according to agreed terms. Several factors work together to establish a presence in the market in the eyes of Eastern European buyers. A high ranking in all factors in not necessarily essential to negotiate and complete successfully a particular sale. Overall success of a marketing program, however, will depend on the seller understanding the needs and concerns of buyers.

Direct Source

A common attitude among Communist economic planners is that market intermediaries add more cost than value to a product and should be avoided in trading relationships. Import decisionmakers in these countries frequently mentioned their desire for a direct source of grain. Two major concerns seemed to be behind this desire for direct sources.

First is an assurance of supply. Assurance of a food supply is felt more deeply in food-deficit countries than we, in the food-surplus United States, often appreciate. Concern over supply is especially great for principal food commodities such as meat. Polish officials cited meat shortages, combined with abruptly increased food prices, as contributing greatly to political instability on several occasions. Grain supplies are viewed as a principal food commodity and, as such, concern over supply reaches the highest levels of government. Inadequate or excessive grain imports by the FTO is likely to reach the attention of high state officials, who, in turn, react to possible demands by the people for adequate food supplies.

Aggravating the concern over inadequate grain imports is the greater inflexibility of centrally planned economies to deal with the changing world grain situation. Increases in grain imports to cover a domestic shortfall in production require not only grain purchases but also allocation of scarce foreign exchange in hard currencies. Often, additional foreign exchange for grain must be withdrawn from planned use in other sectors of the economy, a difficult task for any government.

For these reasons, the prospect of stable grain supplies for import, or at least relatively stable prices, is a desirable factor for Eastern European grain buyers.

Not clear, however, is whether U.S. cooperatives generally are perceived as able to provide greater assurances of supply than major international grain-trading companies or parastate grain-marketing boards. Cooperatives' receiving more than 40 percent of the grain sold by U.S. farmers suggests ability to supply grain. Also, the fact producers own and control cooperatives satisfies the desire to avoid dealing with intermediaries.

Cooperatives' unwillingness to trade in grain grown outside the United States, however, lessens the perception of Eastern European officials that they can be reliable suppliers. Work stoppages by longshoremen and recurring grain embargoes by the U.S. Government remind these officials that relying on a single source for vital imports can by risky.

A second reason behind a desire for direct sources is the perceived opportunity for reduced prices by eliminating intermediaries' profits. In conversations with Eastern European officials, especially those at higher levels, the idea of dealing directly was mentioned frequently. Grain traders, however, mentioned this idea infrequently, and most often in the context of encouraging U.S. cooperatives to enter the international grain trade to provide additional competition and a check on multinational grain-trading companies.

Grain traders deal with intermediaries every day and feel generally the services they provide justify additional costs. In fact, traders suggested grain bids from cooperatives usually carry a higher price than those from multinational grain companies. In the eyes of Eastern European traders, the marketing advantage to cooperatives of being direct sources of grain is limited a least for now.

Adequate Volume

As noted earlier, Eastern European countries import substantial quantities of grains and oilseeds. Exclusive import rights means the FTO often may be in the market for relatively large purchases. Most sales contracts are for shipload quantities or more.

FTO's expect selling organizations with which they deal to be large enough to handle their requests for business. Also, importers are reluctant to deal with sellers that can supply only one-time or seasonal grain sales.

Assurance of Performance

Assurance an exporting company can and will deliver according to agreed terms is a major consideration in selecting the supplying company. The most important evidence of performance is, of course, past activities in international trade. Eastern European trading officials stressed the importance of a good performance record. Because selling to centrally planned countries requires some specialized knowledge and

experience, the best evidence of performance, as expressed by several traders, was to know a U.S. cooperative has traded successfully with other centrally planned countries. In most cases, U.S. cooperatives were not well recognized by Eastern European buyers. Most traders knew of Farmers Export Co. but recognition of other U.S. exporting cooperatives was spotty.

An important factor in evaluating potential for performance is ability to originate grains from multiple origins, reducing the importing country's dependence on a single country or a few ports.

Convenient Access to Exporters

One principal handicap of U.S.-based grain exporters is the distance over which one must communicate to sell in Eastern Europe. The distance increases the cost of communications and makes it more difficult to get timely information due to differences in working hours. There is a 7-hour time difference between Chicago (Central Standard Time) and Berlin and Prague, and an 8-hour difference between Chicago and Warsaw and Budapest. At best, normal business hours have only a 2- or 3-hour overlap, reducing opportunities for daily communications between buyers and sellers and hampering sales negotiations.

Eastern European buyers strongly preferred to deal with sellers based in Europe. Poland, which uses her diplomatic mission in New York to gather information and negotiate with U.S. sellers was a notable exception. Traders in other countries suggested they preferred dealing with traders based in Europe with sufficient authority to make sales decisions. The greater distances also reduce opportunities for personal contact between buyers and sellers.

Market Information and Analysis

Rapidly changing world grain markets require traders continually to update their market information. Eastern European traders preferred daily or more frequent contact with grain suppliers. Each importing FTO conducts, or has access to, in-house economic analyses of the world grain situation, supplemented by traders frequent contacts with potential sellers. Multinational grain-trading companies usually were viewed as excellent sources of market information and analysis. Their worldwide orientation more closely matched preferences of Eastern European buyers, who usually felt the FTO should buy from the lowest cost supplier, regardless of origin. Most grain-exporting cooperatives could offer detailed market information for the United States and perhaps one or two other countries.

Several Western European traders suggested daily contact with Eastern European buyers was useful to both groups. Eastern European countries are rather large buyers of grain, and knowing, or guessing correctly, their purchase plans can create favorable trading positions for Western exporters, not only in Eastern Europe but in other countries.

Personal Acquaintance, Trust, and Responsibility

Buyers for Eastern European countries seemed to emphasize greatly personal acquaintance with sellers. This emphasis is likely related to assurance of performance stressed by Eastern European buyers. Problems that may arise with negotiation and delivery of a contract can be avoided more easily or resolved between personal acquaintances. As with grain traders here in the United States, those in Eastern Europe have a desire for honesty and trust in grain dealings.

Pricing Considerations

Sometimes, it is said price plays a less significant role in affecting decisions in centrally planned than in market economies. This is true, in that movements in world price levels do not necessarily affect quantities of goods produced and consumed within centrally planned economies. The reason is domestic prices received by producers and paid by consumers have been considerably insulated from world price movements, although the situation varies from country to country and over time.

However, firms selling grains to centrally planned economies would be misled if they construed the likelihood total imports may show little response to world price movements to mean it is not important to offer competitive prices to Eastern European buyers. Foreign trade monopolies are instructed to buy from the lowest bidder, other things being equal, so an individual firm must be competitive. Purchases from Western sellers cost Eastern European economies hard currency, and they are determined to conserve on outlays by buying as cheaply as possible.

Occasionally, the lowest bidder will not get the sale, because some other consideration is involved, such as possible willingness of another seller to offer better nonprice terms. For example, willingness to accept the Eastern European country's goods in a countertrade arrangement, a reputation for superior quality and reliability, or provision of credit on desirable terms could result in a purchase from other than the lowest bidder. These exceptions are infrequent. Instances will occur where politics or other noncommercial issues will override price in selecting import sources, especially where bilaterial agreements are involved with other governments or particular ideological matters make one seller more amenable than another.

Mechanics of pricing when selling to government buyers in Eastern Europe follow well-established procedures. Importers in these countries use formal public tenders and private tenders to make contact with sellers in the grain trade. Pricing terms of a sale are specified in a legal contract along with other terms, such as quantity and quality of grain, etc.[32]

Flat price contracts, where price of grain is fixed at time of sale, is perhaps the most common pricing arrangement utilized in sales to Eastern European buyers. However, Poland in particular, sometimes will request basis or unpriced contracts. In basis-price contracts, importers retain the flexibility to fix the price any time before taking delivery. The contract fixes the basis between final price and a designated futures price. The purchaser can then lock in a flat price at any time the futures price is favorable by purchasing a corresponding futures contract and turning its long futures position over to the exporter. The flat price of the sale is settled by adding the previously agreed-on basis price to the price at which the futures are exchanged.

Eastern European buyers perceived cooperative export organizations often have not had flexible enough prices to be competitive. They noted cooperative exporters had been unwilling to take risks in the market and bid to the same extent as other exporters. If this perception is correct, it suggests cooperatives may need to improve their market information and risk management to become substantial exporters to Eastern Europe.

Financing and Credit

In an export-sales transaction, the seller prefers payment as soon as possible, while the buyer prefers payment after delivery or after resale. These conflicting desires often are solved by extending credit. Firms able to offer or arrange for credit increase potential customers and sales.

Trading with Eastern Europe usually requires financing. Otherwise, trade is constrained. Credit terms in Eastern Europe are different from those in most other regions—both in those offered by companies, banks, and other Western financial institutions and in those Eastern European banks and trade officials are willing to accept. Eastern Europeans request special treatment. For example, they generally are unwilling to accept credit in a currency other than that of the supplier's country, and they request long-term credit with interest rates below prevailing market conditions.

Credit may be extended for the short term, usually defined as up to 180 days. Short-term credit essentially covers working capital needs of buyer or seller. Credit extended for more than 180 days usually is considered long term.

Credit may be extended to either buyer or seller. Buyer credit usually is extended directly to the Eastern European buyer, usually the FTO, by the lending institution. The lending institution may be a Western bank, an export-credit lending institution in the exporting country, or the central bank of the importing country. Buyer credit is available for short or long terms and often for large amounts.

Exporters extend supplier credit to foreign importers. Supplier credit includes letters of credit, cash against documents, sales on open account, bills of exchange, and short- or medium-term credit from the supplier's own resources.

A major form of buyer credit to Eastern European countries is available through a U.S. Government program. The U.S. Department of Agriculture offers Commodity Credit Corporation's (CCC) export-credit guarantee program to expand sales of agricultural commodities abroad by making financing available to countries that might not otherwise be able to afford purchases.

Export-Import Bank of the United States, known as Eximbank, is an independent corporate agency of the U.S. Government that assists in financing U.S. export trade and guaranteeing credits to overseas buyers of U.S. goods and services. It guarantees and insures short- and medium-term export transactions and discounts and export-debt obligations held by commercial banks. In recent years, the Eximbanks's role has been minor in financing agricultural exports.

Other U.S. Government agencies provide information to facilitate export sales and underwrite risks for U.S. exports, including Foreign Credit Insurance Association (FCIA), Private Export Funding Corporation (PEFCO), Overseas Private Investment Corporation (OPIC), as well as various agencies of the Department of Commerce.

While governments or their financial institutions may provide credit when the commercial banking system is unable to, it is essential for exporters to develop a working relationship with commercial banks. Commercial banks can provide many financial services beneficial to exporters and help a firm seek out alternative financing sources and prepare necessary proposals. Banks often initiate credit and assist with financing capital goods, exports, and Eximbank transactions. Large commercial banks also offer exporters various ancillary services, including buying and selling foreign exchange; collecting foreign receivables; providing credit information on foreign buyers; arranging introductions to foreign banks; and supplying information on overseas taxes, licenses, and

[32]For more details on procedures involved in transacting and pricing grain sales, see Neilson Conklin, Gerhard Wilbert, and Reynold Dahl, "Pricing of Grain Exports and the Role of Futures Markets," *Minnesota Agricultural Economics*, No. 614, (December 1979)

regulations affecting foreign trade. The bulk of U.S. export sales are short-term transactions for which exporters seek commercial bank assistance. The majority of this assitance is in documentary letters of credit, with the remainder involving collection of accounts, that is, drafts drawn on foreign customers.

In 1980, Congress amended the Farm Credit Act of 1971, giving authority to Banks for Cooperatives (BC's) to provide credit for export financing and related financial services. BC's now offer international financial services including letters of credit, collections, bankers' acceptances, international trade financing, and foreign exchange services. BC's may make or participate in loans and commitments and extend technical or financial assistance to a domestic or foreign party for import or export transactions with U.S. cooperatives. When these financial services become fully operational, they should assist U.S. cooperatives by providing financial services often desired by Eastern European buyers.

Although the financial systems are similar, the particular situation of each country generates different requirements for financing imports. Credit requirements vary widely from being essential for sales to Poland to only a minor factor in negotiating sales to Czechoslovakia. Also, the importance of credit to make sales varies depending on the immediate credit needs of the importing country.

Czechoslovakia

Czechoslovakia has the lowest overall indebtedness with Western countries, with a debt-service ratio of 22 percent in 1979.[33] The government has a policy to avoid credit, particularly from the West. Czechoslovakia wants to keep her credit well within the capacity to repay. All credit transactions are handled through the Commercial Bank of Czechoslovakia, Ltd. (COB), and most commercial deals continue to be financed with traditional instruments. Czechoslovakian negotiators do not stress sales on open account. Most short-term credit sales are covered by letters of credit rather than cash against documents.

Koospol, the FTO responsible for importing grains and oilseeds, must get permission from the Ministry of Finance for foreign exchange before importing agricultural commodities. Koospol is not involved with any foreign currency aspects of the transaction. COB has lines of credit with foreign banks and provides all credit for Koospol. Credit is not an important consideration in trading with Czechoslovakia. In addition, because Czechoslovakia does not have most-favored-nation status, her trade with the United States is constrained.

German Democratic Republic

G.D.R. frequently uses credit for financing agricultural imports. A fourth of her borrowings from the West has been used for importing grain and fodder.

Credit arrangements for purchases are handled by G.D.R.'s foreign trade bank, Deutsche Aussenhandelsbank AG (DABA). The FTO's importing grains stated they pay for purchases in cash and it was not always necessary for a particular supplier to have credit available to make sales to G.D.R.

FTO's in G.D.R. prefer open-account payment terms to letters of credit, and supplier credit to buyer credit. Credit may be negotiated either through DABA or Western European banks. Western banks with branches in West Germany are the most successful in granting credit to G.D.R.

The debt-service ratio for G.D.R. is 54 percent and not expected to improve. One factor constraining improvement is lack of most-favored-nation status in the United States, which inhibits G.D.R.'s exports to the United States. G.D.R. officials frequently argued grain imports from the United States would increase if most favored nation status were granted. The effect on imports would likely be small, however, due to the high priority given grain imports.

Hungary

Hungary makes few requests for supplier credit. Cash or short-term credit is used for all plannned imports, such as grains and oilseeds, and evidence accounts are used for countertrade. The National Bank of Hungary, Magyar Nemzeti Bank, borrows money from international sources according to annual import needs and regulates the financial implementation of export and import transactions. The Hungarian Foreign Trade Bank, Ltd., Magyar Külkereskedelmi Bank Rt., carries out banking operations connected with foreign countries. It allocates credit to Hungarian FTO's which negotiate on a cash or short-term credit basis with the seller.

FTO's negotiate contracts, primarily considering prices and quality and reliability of supplier, without worrying about securing favorable supplier credit. Because the FTO is given funds needed for importing grains and oilseeds, no subsequent requests are made for deferred payment. Hungarians leave the choice of payment collection to the supplier, and there is no pressure for open-account terms. Hungary is considered one of the easier and more practical countries to deal with in financing imports.

[33]The debt-service ratio is a given country's amount of debt servicing in a given year relative to its exports to hard-currency countries. For example, debt servicing of $400 million, relative to exports for hard currency of $1 billion would be a debt-service ratio 0f 40 percent.

Poland

Next to the Soviet Union, Poland was the West's largest customer in Eastern Europe. Poland's balance of payments is under severe pressure and the precise extent of her external debt is uncertain. Estimates range between $25 billion $30 billion as of December 31, 1981. Of this, $25.5 billion was estimated as hard-currency debt with the West and $4.7 billion as debt with COMECON countries. Debt-service obligations for 1982 are estimated at $10.4 billion of which $6.8 billion is principal. Poland has not made scheduled payments and has requested refinancing of loans due to the United States and other Western countries.

Bank Handlowy w Warszawie (BHW) in Poland is involved most directly in foreign trade activities and arranges all credit terms for transactions between U.S. exporters and foreign trade organizations. Polish FTO's suggest documentary settlement be provided for imports. For amounts up to $1 million, letters of credit with maturities of 180 days usually are requested and for higher amounts, 360 days.

Poland requires credit to purchase grain from the West. Grain traders suggested before sales can be negotiated, the supplier needs to discuss credit terms with the Foreign Trade Bank. Grain traders and Polish officials clearly stated cooperatives need to offer financing to compete with other traders. Usually, Poland wants a minimum of 24 months' credit and, in many cases, up to 36 months' credit for grain and oilseed purchases. Government officials expressed preferences for government credits.

Polish FTO's responsible for importing grains said they look for the least complicated possibilities for trade by considering traditional factors of price, quality, reliability of supplier, etc. While credit availability is important to them, terms are negotiated elsewhere and often are not part of the factors the FTO considers in purchasing grains.

Overview

Poland and G.D.R. have substantial credit needs, while Hungary and Czechoslovakia do not. The debt-service ratio for the two countries needing much credit is quite high, while it is low for the other two. Grain traders suggest countries with high credit needs expect a supplier to at least make contact with the central bank in discussing supplier or other sources of credit to facilitate sales of grains and oilseeds. The FTO's themselves are not involved directly in credit negotiations, nor do they have responsibility for considering credit terms when negotiating grain and oilseed imports.

Use of Marketing Intermediaries

Using marketing intermediaries is a possible strategy for developing and enhancing sales to Eastern Europe. Several types of intermediaries are common in international trade, including export-commission agents, export managers, brokers, foreign distributorships, and overseas offices. Of these types of intermediaries, only export-commission agents and overseas offices are of much importance to grain trading in Eastern Europe.

Brokers have little to offer, because there are few import decisionmakers and they are identified easily. Also, Eastern European grain buyers do not favor dealing with brokers, feeling they add unnecessary costs to the product.

The same feeling of adding unnecessary costs applies to export managers and foreign distributorships. The functions these intermediaries typically perform usually are provided by grain exporters or purchasing FTO's.

All FTO's stated they preferred local agents or foreign-offices in their countries. A local representative, it was suggested, would give the FTO easier access to information and provide a nearby contact to solve problems arising from a sale. The local representative also can develop a working relationship with the FTO that could lead to improved estimates of import needs and timing of purchases. FTO's prefer a representative with authority to make sales decisions on the spot rather than one needing to clear decisions with an overseas office.

It was suggested a new firm trying to make sales to G.D.R. should be assigned an agent to represent it to the FTO. Once a firm was established in trading grain, it could negotiate directly with Nahrung, the importing FTO. A state agency, Agrima GmbH, provides representatives for foreign firms importing or exporting food and other agricultural products with G.D.R. These representatives are G.D.R. citizens and, as employees of the state agency, are working in the interests of their own country. Nevertheless, it was suggested they could be useful in introducing a new potential trader to the proper authorities. Agrima charges a fee for its sercices.

For grain trading, engaging an East German agent is probably not necessary, even for new entrants. Agents in Western Europe apparently are able to represent properly and handle all transactions for Western firms to Eastern European FTO's.

Joint Ventures and Technical Assistance

Several officials in the Eastern European countries visited were interested in joint ventures or technical-assistance projects. They thought such activities would enhance the potential for cooperatives to market grain in their countries. The actual increase in sales, however, is not assured and may depend on specific projects carried out. In general, FTO's do not favor tie-in sales and may not encourage or support a cooperative in making such arrangements. However, if

particular tie-in arrangements appear beneficial to higher officials in importing countries, FTO's will comply.

Joint Ventures

Joint ventures between cooperatives and Eastern European organizations for promoting trade include the following areas: feed milling; dairy, poultry, and cattle-feedlot operations; processing farm products into food; and other items. The most common joint venture involves international marketing of products made in an Eastern European country through a jointly owned enterprise established in an Eastern country. Both partners contribute capital and share in management decisions as well as profits and losses.

Investments in joint ventures are permitted in Hungary under special legal provisions. In addition, Bulgaria, Poland (before imposition of martial law), and Romania allow joint equity investment and joint management in such ventures.

In Hungary, it is possible to establish joint ventures that have legal characteristics similar to those in market-economy countries. They operate under co-management, co-ownership of capital, and sharing of profits and risk. Joint ventures exist in the industrial area, but officials expressed an interest in developing them in the feed-livestock complex.

It was suggested a joint venture in feed manufacturing or livestock feeding be established with a Hungarian cooperative. If the venture were successful, this cooperative eventually could be allowed to import grains directly from a foreign supplier without going through the FTO.

In addition, some state farms were interested in joint ventures to develop seed for use in Hungary and for export to other countries. Hungary has established relationships with U.S. seed firms specializing in hybrid corn and sorghum.

All countries suggested joint ventures with U.S. firms in third countries were possible. Poland stated interest in joint ventures with U.S. companies in third countries at the seventh session of the Joint American-Polish Trade Commission in Warsaw in 1977.[34]

Poland was particularly interested in chemical plants and equipment, food-processing and wood-processing installations, and transportation rolling stock. In all these areas, Polish firms already carry out projects abroad. Polish interest in food-processing plants include those for palm and soya oil, starch, distilling, brewing, fodder, yeast, dairy, slaughter, meat processing, bottling, grain milling, and baking.

[34]U.S. Department of Commerce, *Commercial America*, (February 27, 1978), p. 9.

The organization, DAL under the Ministry of Foreign Trade, is the FTO responsible for developing joint ventures with Polish companies. DAL may represent other Polish companies or may itself become a joint partner.

The Ministry of Food Industry and Purchase suggested a joint venture was desired in overcoming bottlenecks in grain handling, namely additional port facilities. Discussions with U.S. and other foreign companies, including cooperatives, have occurred over the past several years. Participation by U.S. companies was encouraged by the possibility Commodity Credit Corporation would make funds available for constructing foreign-port receiving facilities. Funds for this purpose were not appropriated. The ministry also expressed interest in joint ventures in facilities for feed milling, livestock feeding, animal breeding, and oilseed crushing.

Officials in both Czechoslovakia and G.D.R. stated the only possibility for joint ventures with U.S. companies was in third countries. To date, no such arrangements have been established. Officials frequently cited absence of most-favored-nation status for these two countries as a major impediment to joint ventures with U.S. companies.

Technical Assistance

Technical assistance is working with and through host country people to accomplish development goals. Purposes may be both long and short term and may change over time, even within the same country. Technical assistance involves building individual and institutional capability to deal with problems through policies and programs.

While most Eastern European officials were unenthusiastic about joint ventures, many did look favorably on technical-assistance projects, perhaps as a result of favorable impressions of those of Foreign Agricultural Service's cooperator programs. Officials frequently complimented these organizations for service to the agricultural sector.

At the same time, they avoided tying technical assistance to sales guarantees for specific U.S. cooperatives. Officials in the ministries usually stated a cooperative's participation in a technical-assistance project would "enhance" trade opportunties, if trading terms were equivalent to terms offered by a noncooperative. Traders at the FTO's, however, were least enthusiastic about restrictions on their decisionmaking abilities in purchasing grain. Clearly FTO's did not view their role as coordinating or tying in grain imports with technical assistance projects. Usually, no agency is specifically charged with this coordinating responsibility. Such a task would likely fall to the seller.

Poland's Ministry of Agriculture showed interest in technical assistance on animal feed trials, feed milling, and other areas.

An exchange of information with U.S. foreign market development cooperators such as U.S. Feed Grains Council and the American Soybean Association has already been taking place. Ministry officials also indicated interest in an exchange with U.S. cooperatives in these technical assistance areas. The Ministry of Food Industry and Purchase also indicated technical assistance programs were going on with National Renders Association on bone meal from the United States. These programs have been going on for a number of years and have yielded positive results. Assistance has included feed trials, technical seminars, addressing industry problems, animal production, and a textbook on feed technology written by U.S. feed manufacturers. The Polish government officials were thankful for and impressed with this type of technical assistance.

Hungary has received a number of technical assistance programs. Several U.S. companies and associations have participated in these programs including FMC, Central Soya, Ralston Purina, Holstein Freisian Association, Hereford Association, and American Breeding Service. The Hungarian National Center of State Farms showed interest in technical assistance on livestock production, breeding, and feeding. Hungarian diplomatic officials in Washington suggested feed milling as an area where experts could be brought in, or Hungarian officials could visit the United States.

Technical-assistance and cooperator programs are possible with Czechoslovakia, if carried out through appropriate channels. Government officials did not indicate any common areas of interest for pursuing technical-assistance programs. However, a U.S. market development team recommended that, in view of Czechoslovaika's emerging plan to improve milk production and deteriorating pork quality, a major livestock seminar be organized to focus on dairy breeding and nutrition, new trends in dairy housing, swine nutrition, and swine cross breeding.[35]

G.D.R. officials expressed interest in technical assistance, although exact needs were unclear. The U.S. agricultural attaché suggested technical assistance was needed in feed milling and food processing and distribution. U.S. Strategic Planning Team suggested possible demonstration projects in dairy feedlots or in hog feeding.[36] The planning team also reported G.D.R. officials suggested help in using hard red wheats for breadmaking and blending textured soy protein in sausage.

On the other hand, G.D.R. officials suggested rather than providing assistance on technical aspects of feeding or food processing, cooperatives should carry out promotion projects on commerical aspects of the grain trade. This suggestion translates, at least in part, to one that cooperatives provide exhibits at International Trade Center in Berlin, the Leipzig Fair, and special agricultural shows. The reason for the request was not clear, but several international grain companies sponsor exhibits at the Leipzig fair.

Overview—Officials in Poland and Hungary wanted technical assistance. Officials in Czechoslovakia and G.D.R. are less enthusiastic. G.D.R. officials were unique in their suggestion cooperatives exhibit at trade fairs.

Technical-assistance programs of U.S. cooperator groups are viewed as successful and useful to the host country. Farmer cooperatives may be able to use this reservoir of good performance to propose additional projects.

Response by various officials showed they were interested in technical-assistance programs and thought they would enhance trade. However, they also felt any trade should be economically competitive. A general consensus was technical assistance would increase visibility of U.S. cooperatives in the market by showing their good intentions toward these countries, which would not go without recognition.

The FTO's have not, however, coordinated purchases of grains and oilseeds with technical assistance in the past. It is difficult to coordinate these two sides of a business relationship. Grain and oilseed sales are short term and competitive, compared with technical assistance and joint ventures, which are long term, and the results less tangible. Under current operation methods, FTO's are autonomous in their decisionmaking on when, where, from whom, and at what price to buy grains and oilseeds.

Role of Countertrade

Western firms doing business with Eastern European countries need to be familiar with a variety of business measures known as countertrade arrangements. These involve contract arrangements in which Western sales of goods are tied to reciprocal purchases of goods from the Eastern European country in question. Countertrade is an important element of East-West trade. At times, Western firms have found willingness to accept countertrade commitments may be a prerequisite to making a sale to an Eastern European partner. Apparently, this has not been the case with grain and oilseed sales, but may be a possibility in future trade. Moreover, ability and willingness to do business on such terms may present a competitive edge to an export organization over other potential sellers. However, any party contemplating such a strategy needs to be aware serious drawbacks to these arrangements frequently are encountered.

[35]Report of the Market Development Team to Czechoslovakia, Hungary, and Romania, April 28-May 14,1978, pp. 5-6.

[36]Report of the Strategic Planning Team to Poland, Bulgaria, and the German Democratic Republic, April 28-May 15, 1978, U.S.D.A.

Eastern European countries stress countertrade in their commercial dealings with Western firms for short-term balance of payments and long-term market penetration reasons.[37] They view countertrade as a means of generating or conserving hard currency through offset delivery provisions of countertrade contracts. Eastern European countries also recognize their own lack of success in penetrating Western markets and see countertrade as a way of using access and marketing capabilities of Western export firms in their own home markets to introduce Eastern European products to these markets.

Several forms of countertrade transactions can be used.[38] Counterpurchase is the form most likely to be relevant to agricultural export organizations, but there also are compensation, barter, and switch versions of countertrade. Counterpurchase is a form of countertrade involving counterdeliveries of goods that are nonresultant products. The value of these goods is generally less than that of those sold by the Western firm. As a practical matter, this would almost have to be the case to be acceptable to a grain-exporting firm.

Compensation arrangements, also referred to as buy-back arrangements, involve resultant goods directly derived from goods or technology provided by the West. Compensation arrangements have proved useful in East-West trade transactions where the Eastern country has abundant, cheap labor or raw materials, such as energy and other mineral resources, needed in the West, and the Western firm can provide technological assistance and capital equipment used in manufacturing products based on those inputs. Unfortunately, this arrangement does not appear suitable for U.S. export organizations interested in selling raw materials. Compensation could involve U.S. cooperatives selling grains and oilseeds and buying back livestock products.

U.S. farmer cooperatives are not in the business of marketing other countries' livestock products. A broader cooperation arrangement involving developing energy sources and buying back resulting products, such as fertilizer and petroleum, as part of a long-term, grain-export agreement does not seem feasible for the four countries visited. These countries are not endowed with great quantities of raw materials needed in the West. Also, such a deal would be complex, difficult to negotiate, and possibly subject to governmental restrictions.

Barter involves direct exchange of goods without money involved. This type of transaction is relatively rare. Switch transactions are based on multilateral (involving more than two countries) use of bilateral clearing accounts. These transactions primarily involve trading countries, usually other COMECON countries or less developed nations whose currencies are nonconvertible. Barter and switch transactions would be involved only in exceptional cases associated with cooperative grain-export transactions with Eastern European buyers.

Countertrade Procedures

Cooperative export organizations wishing to do business with Eastern European buyers through a countertrade arrangement should be aware of certain basic procedures. The complexity of countertrade precludes adequately describing all the details and nuances involved in such arrangements, but a few major procedures can be summarized.

A common and advisable procedure in countertrade deals is to draw up separate contracts covering export and import commitments. Also, a delivery clause probably would be necessary to take the U.S. party off the hook in the event the designated Eastern European supplier fails to meet delivery and/or service conditions on goods accepted as countertrade items. If, as is frequently the case, a third party (such as a supply cooperative or a trading house) is involved in disposing of goods accepted in countertrade, its role should be spelled out explicitly in the contract.

Because grains and oilseeds are typically high enough on the import priority of most Eastern European countries for the foreign trade bank to set aside hard currency to meet the importing FTO's needs, legally binding countertrade contracts usually would not be a prerequisite to doing business. An alternative is to sign a letter of intent, which amounts to a gentlemen's agreement between the FTO and the Western exporter that the latter will purchase products from the Eastern European country within a certain time period, provided they are available on suitable terms.

While the agreement is a part of the original sales contract, it is only morally, not legally, binding. This shows the exporter's willingness to reciprocate on a sale and apparently appeals to FTO negotiators at times, because they can demonstrate to their superiors they have negotiated a purchase that also may exhance the export efforts of their country. However, if such an agreement later is construed by the FTO's superiors to be a charade, it can damage seriously the reputation of the Western exporter.

For this reason, it is important for U.S. exporters to take such a letter of intent seriously. Indeed, because it is even more likely it will prove impossible to locate suitable goods to be

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[37] Jenelle Matheson, Paul McCarthy, and Steven Flanders, "Countertrade Practices in Eastern Europe," *East European Economies Post Helsinki*, (Congress of the United States Joint Economic Committee, August 25, 1977), pp. 1277-1311.

[38] A more detailed treatment of these forms of doing business is given in Pompiliu Verzariu, *Countertrade Practices in East Europe, the Soviet Union, and China: An Introductory Guide to Business*, (U.S. Department of Commerce, International Trade Administration, April, 1980).

purchased than under a legally binding countertrade agreement, the purchase is less likely to be carried out. This raises the danger Eastern European foreign trade authorities will become disgruntled with the firm and possibly even blacklist it in future transactions.

Locating products acceptable to a grain-exporting organization representing U.S. farmer cooperatives as partial or complete payment for a sale to an Eastern European buyer is difficult, because the organization is seldom in the business of selling or using products imported. Developing the staff and organization necessary to do this may not be feasible. Firms frequently encounter this problem, and a fairly common way of getting around it is to use third-party trading houses specializing in disposing of goods acquired in countertrade transactions with socialist countries.

Numerous firms are concerned entirely with this type of trade or have special departments assigned to this task. Vienna, Austria, a center of East-West trade, harbors numerous trading houses specializing in countertrade. Several other locations, including Chicago and New York, serve as headquarters for firms engaging in such transactions. These organizations, for the most part, have no history of involvement in the grain trade, but rather focus on manufactured goods and raw materials. However, some multinational firms that have organized separate departments or subsidiaries to deal with grain sales are equipped for countertrade. The Swiss grain firm, André, created a subsidiary called Finco after World War II that specialized in barter, switch, and other arrangements. A U.S. firm, Phillips Brothers, Inc., which has entered the grain trade relatively recently, has an autonomous department specializing in countertrade. As of summer 1979, though, it had not engaged in countertrade involving grain. Japanese international trading companies also are at times involved in grain and countertrade transactions.[39]

If a trading company is included in negotiations, a common procedures is for it to issue a "serious indication" document. This document shows willingness to assume the countertrade commitment of a specified commodity at a designated cost if certain specifications, clauses, and other conditions are followed. This permits the seller to proceed with negotiations, knowing the terms under which it can dispose of countertrade items.

If a third-party trading house is to be involved in locating countertrade goods, the contract should include a "transfer clause," specifying the countertrade commitment be transferred to it. So once countertrade products are located by the trading house, the purchase contract can be linked explicitly to the original export sales contract and countertrade commitment.

Relying on third-party trading houses to dispose of countertrade goods has drawbacks. Expenses for the services performed by these organizations become a cost of the original sales transaction. Also, it has been reported that involvement by trading houses is opposed at times by Eastern European FTO negotiators who want to deal directly with the principal, because they harbor the impression that involvement of a third party increases the cost of imports. Another drawback is the seller's own negotiators are unable to master the intricacies of countertrade and are thus perhaps less proficient in conducting negotiations.

Trading houses willing to assume obligations to dispose of countertrade goods are not necessarily easy to locate. Few Western trading houses engage in countertrade as their principal line of business. They often find it more profitable to engage in the sales side of their clients' transactions in Eastern Europe and view assuming countertrade obligations as a necessary step in obtaining such accounts. In such cases, using trading houses as third-party intermediaries sometimes is more appropriate when the Western firm undertakes longer term commitments.

Another possible arrangement that might facilitate U.S. cooperative organizations doing business with Eastern Europe involves cooperative interests forming a counterpart FTO to deal with Eastern European FTO's. The organization could handle direct sales; countertrade; barter; switch deals; and cooperative arrangements, including technical assistance, joint ventures, and other trade matters. This would allow for pooling resources and developing specialized trading skills to meet the unique needs of the region and allow member cooperatives to spread the high cost of acquiring the expertise and facilities needed to carry out countertrade and other trading activities. It would expedite an export-import combination that could be useful in light of the hard-currency problems and bilateral trading tendencies of the Eastern Europeans. Finally, such a centralized organization perhaps would be in a better position to countervail any bargaining advantage held by Eastern European FTO's who act as centralized buyers and sellers.

Pitfalls

Countertrade is by no means a primrose path to business success in Eastern Europe. It is extremely difficult to orchestrate, due to problems of arranging reciprocal purchases and inflexibilities of the planning bureaucracy in Eastern Europe. The reciprocal feature is especially cumbersome, because it requires a "double coincidence of wants" between buying and selling parties.

[39] If cooperatives were to consider joint ventures or cooperation with other private grain-exporting organizations, the capability of the latter to implement countertrade might be a consideration for joining them.

Indeed, in discussions with Eastern European officials engaged in buying grain and oilseed imports, the frequent impression is that they personally recognize countertrade can be wasteful and time consuming. Barring external pressure from higher authority, they would prefer only to give lip service to such schemes.

One of the more serious drawbacks to a countertrade strategy is that unsalable, out-of-date items often tend to get shuffled into countertrade. Eastern European FTO's often will not allow goods in high demand in Western markets to be used as linkage items for countertrade. Some firms have had an item they previously purchased to fulfill countertrade obligations suddenly disappear from the available list when the time to renew the annual contract came, because that product was no longer considered difficult to sell in hard-currency markets. If forced to take unwanted, inferior-quality products, exporters would have to sell them at a discount and absorb the discount as a surcharge to their own sales price.

Given low margins associated with grain, sales could be particularly difficult, unless the buying FTO made exception to its general rule of buying from the customer offering the lowest price. Eastern European officials charged with buying grain insisted they would be unwilling to pay a premium to accommodate such countertrade arrangements.

Nevertheless, Western firms selling other goods to other FTO's have found them willing to buy from a firm at higher prices for payment in kind. This should not be ruled out completely in agricultural trade, because policies are sometimes fluid over time.

Countertrade arrangements face the potential of encountering import restrictions in the United States, particularly when imports reach relatively large dimensions, posing an additional difficulty. A case in point is the Soviet/Occidental Petroleum Corporation buy/back arrangement, which resulted in U.S. chemical producers lodging an injury complaint with U.S. International Trade Commission. Occidental had entered a 20-year agreement with the Soviet Union to provide construction assistance and superphosphoric acid to a Soviet plant and buy back up to 2.1 million metric tons of anhydrous ammonia annually and a million tons each of urea and potash to be marketed primarily in the United States.[40]

[40]The commission initially voted favorably on the U.S. chemical producers' complaint and recommended quotas be imposed on imports of Soviet ammonia, starting with a ceiling of a million short tons in 1980. The President at first declined but later ruled favorably on the recommendation, although possibly more in response to the Soviet invasion of Afghanistan than the commission ruling. A later ruling by the International Trade Commission failed to support the contention of domestic injury, so the temporary import quota has been removed. This type of complication always is subject to arise when a firm assumes a role involving imports from centrally planned countries.

Possible Countertrade Goods

As noted, the most difficult aspect of countertrade is identifying goods that could feasibly be acquired as a part of the reciprocal arrangement. One possible avenue of conducting countertrade would be to arrange to market commodities acquired in countertrade deals through U.S. farm supply cooperatives. A survey of farm supply cooperatives in table 20 indicates several commodities these organizations might be willing to import. Potential total value of these imports exceeded $1.4 billion in 1978. Because farm supply cooperatives could provide the Eastern Europeans coveted direct access to the U.S. market, U.S. cooperative export organizations might be able to exploit successfully a countertrade stategy by disposing of items received in countertrade through these organizations.

Success is of course not assured for such a venture. It remains to be determined if Eastern Europeans are willing or able to provide these goods as partial payment for agricultural imports. Also, the rigidity and complexity of dealing with Eastern European FT0's could be particularly pronounced, because goods indicated as potentially desirable imports are handled by FTO's supervised by ministries other than the agricultural ministry that supervises import needs for grains, oilseeds, and other agricultural goods. Such linkage arrangements are not uncommon in countertrade, and in certain cases, specialized FTO's have been set up by the Eastern Europeans to facilitate these arrangments. Nevertheless, to coordinate separate import/export organizations, not just in Eastern Europe but in the United States as well, would be a formidable task entailing considerable resources and risks.

It is just as difficult to identify goods Eastern Europeans might be willing and able to offer in countertrade as it is to identify what goods cooperatives would be able to acquire. Current examples of countertrade transactions only give limited insight into this question. Table 21 includes a list of some countertrade arrangements successfully organized in Eastern Europe, involving types of goods that might be of interest to U.S. cooperatives. These examples do not serve as ideal prototypes a cooperative export organization could emulate easily, because they do not involve directly grain or oilseeds in the transaction.

From interviews during the course of this study, several instances of discussions of countertrade transactions involving grain sales were cited, but no actual transaction could be documented. Nevertheless, interviews with Western businessmen and Eastern European trade officials and examination of the types of goods the countries in question have shown they can produce offer some suggestions for products that might be included in a countertrade arrangement.

Table 20—Interest in importing farm supplies by selected farm supply cooperatives

Commodity	Approximate value of potential imports
	Million dollars
Lawn and Garden	
High interest: [1] Chain saws and accessories, selected lawn equipment (carts, fertilizer spreaders, hoses); plants; and peat moss	3-4
Medium interest: [2] Mowers, tillers, other motorized lawn equipment and accessories; selected lawn equipment; and planters, pots and related items	6-7
Paint and Supplies	
Medium interest: Roofing paints, stains, and varnishes; paint remover, cleaners, and additives; paint tools and accessories; and wood preservatives	3-4
Tires, Batteries, and Accessories	
Medium interest: Auto, truck, and tractor tires; tubes, batteries and accessories; antifreeze; auto tune-up equipment and supplies; mufflers and exhaust pipes; filters (air, oil, gas); shock absorbers; and brake fluid	100-105
Petroleum Products	
High interest: Crude oil and LP gas	1,000 +
Medium interest: Lubricating oils and greases, and oil furnaces	225-250
Household Appliances and Supplies	
Medium interest: Major appliances, small electrical appliances and kitchen equipment, cleaning soaps and detergents, garbage containers, brooms and mops, and light bulbs	6-7
Farm Machinery and Equipment	
High interest: Grain storage bins and tillage tools	[3]
Medium interest: Grain handling equipment (storage bins, crop dryers, elevators, and augers); testing equipment and supplies; hand sprayers; fertilizer spreaders, wagons and trailers; irrigation pumps; and sprinkler systems	21-22
Feeds, Animal Health Supplies, Livestock Equipment	
High interest: Molasses	6-7
Medium interest: Livestock chemical and medicinal products; pesticides, antibiotics, drugs, and treatments; and livestock equipment including feeders, waters, and slotted floors	29-30
Fertilizer and Farm Chemicals	
High interest: Potash, granular urea, liquid mixed fertilizer, and ammonium sulfate	[4]6 +
Medium interest: Potash, phosphates, ammonium nitrate, granular area, dry mixed fertilizer, anhydrous ammonia, liquid fertilizer, herbicides; and pesticides and fumigants	650-600
Building Materials, Hardware	
High interest: Electrical wires, hardware, and tools; fencing materials; power-assisted hand and shop tools; carpenter and mechanics' hand tools; farmers' hand tools; bolts, nuts, nails, and washers; and roofing and siding panels	18-20
Medium interest: Lumber and plywood; asphalt products; electrical wire, hardware, and tools; fencing materials; plumbing supplies; power-assisted hand and shop tools; carpenter and mechanics' hand tools; farmers' hand tools; insulation materials; bolts, nuts, screws, nails, washers, chains and accessories; rope; ladders; and roofing and siding panels	34-40
Entertainment and Sporting Goods	
High interest: Televisions, radios, and tape recorders	small
Medium interest: Ice chests and beverage coolers and bicycles	small
General Farm Supplies	
High interest: Tarpaulins, baler and binder twine and wire; gloves; shop, barn, and outdoor heaters; and rubber footwear	27-30
Medium interest: Tarpaulins; weatherproofing products; baler wire; and shop, barn, and outdoor heaters	2-3

[1] High interest indicates one or more U.S. cooperatives were seeking alternative or new supplies and would consider imports.
[2] Medium interest indicates one or more U.S. cooperatives would consider importing this product if product specification and commerical terms were appropriate.
[3] No estimate available.
[4] Potash imports could be large. Imports from Canada not included here.

Agricultural equipment might be one possible type of product to build a countertrade arrangement around. A complete, up-to-date inventory and assessment of agricultural equipment availability should be made before deciding whether Eastern Europeans have the potential to tie such projects with U.S. cooperative export organizations. Technology and capability

Table 21—Examples of countertrade transactions with Western firms

Eastern European importing country	Western supplier	Year Signed	Type of Eastern European import	Type of Eastern European export
Poland	Massey Ferguson	1974	Equipment for Ursus tractor plant	Diesel engine and tractors
Poland	Rhone-Poulenc Institut Francis du Petrole	1975	Chemical products and textile fibers	Sulfur
Poland	Creusot-Loire	1976	Equipment and technology for fertilizer plant	Fertilizer
Poland	Katy Industries	1976	Machinery and working programs for shoe production	Shoes
Poland	Krupp-led consortium	1976	Coal gasification plants	Ammonia, urea, and methanol
Hungary	Steiger	1974	Licenses and equipment for manufacture of tractors	Tractor axles
Hungary	Steiger	1976	Technology and components for tractor manufacture	Tractor axles
Hungary	Semperit	1976	License for tire production	Tires
Hungary	Levi Strauss	1977	Material (under negotiation)	Levis
Hungary	Bekoto Pertersime Pvba	1977	Technology for production of egg-collecting and incubator vehicles	Egg-collection and incubator vehicles
Hungary	Hesston	1977	Harvestors (80) and hay-handling systems (12)	Heads and gearboxes for Hesston's harvesters
Hungary	Machinenfabrik Gebruder Claes GmbH	1978	Agricultural equipment	Agricultural equipment
G.D.R.	Berlin Consult GmbH	1975	Construction of meat processing plant	Meat
G.D.R.	Chemi Linz	1976	Pesticides, herbicidal agents, and fertilizers	Potassium salts and special chemicals
G.D.R.	Dow Chemical	1976	Chemicals	Metalworking products, plastics, and chemicals
G.D.R.	Vereinigte Edelstahlwerke	1977	Fine steel products	Potash fertilizers
G.D.R.	Kloeckner Industrie	1978	Potash granulation plant	Potash granulates and unspecified products

Source: Pompiliu Verzariu, *Countertrade Practices in East Europe, the Soviet Union and China: An Introductroy Guide to Business;* op. cit. pp. 79-86; Jenelle Matheson, Paul McCarthy, and Steven Flanders, "Countertrade Practices in Eastern Europe," *East European Economies Post-Helsinki,* pp.1305-1311

to produce agricultural equipment is available, but whether it is sufficient to support sales to the United States through U.S. supply cooperatives is uncertain in light of past history.

In certain cases, however, Eastern Europeans have availed themselves of Western technology through licensing agreements. Thus, their technology may be comparable to Western standards, simply because it is Western technology, though not necessarily of the same level and vintage. In one example of countertrade, the British firm, Massey-Ferguson-Perkins, has licensed a new tractor model to be manufactured at the Ursus tractor factory in Warsaw. Full capacity of 75,000 tractors per year is scheduled for the early 1980's under the license.[41] In another arrangement, Maschinenfabrik Gebruder Class, a West German firm, reportedly has signed a cooperation agreement with the Hungarian FTO, Komplex, covering joint production and marketing of eight-row machines for corn picking and husking.[42] Also International Harvester (U.S.) has a cooperative agreement with the Stalowa Wola factory in Poland and has taken delivery of crawler tractors built for the U.S. market.[43]

Some Eastern European countries have been allowing transportation equipment and services to be counted as fulfilling countertrade commitments. Poland, in particular, has achieved considerable success in expanding its shipyards and fleet of ocean vessels. So this area may offer a possibility for negotiating long-term arrangements involving chartering vessels or purchasing vessels for use by cooperatives for shipping exports to third markets. Hungary also has allowed freight services to third countries to be counted as countertrade services. A great deal of study would be required before feasibility of such an arrangment could be assessed. One problem is that to date cooperative export organizations have undertaken c.i.f. export sales on a limited basis, so they have had little use for such services. There has, however, been some discussion that cooperatives might offer such terms on a broader basis in the future.

Status of Countertrade by Country

Estimates are that 30-35 percent of all Polish imports are financed by countertrade. Although grain and oilseed imports have not been involved directly to date, as much as 50 to 60 percent of imports are expected to be financed by counter deliveries in the early 1980's, as Poland's hard-currency debts continue to press its ability to pay for imports.

Polish grain-trading officials, said countertrade is not required for doing business. Barter reportedly had been used in certain grain transactions, but no form of countertrade had been involved in U.S./Polish dealings. However, officials stated Poles would be open to countertrade proposals, and favorable countertrade proposals could affect positively prospects for trade.

The research team mentioned sulfur, a major Polish export, as a possible countertrade item. Use of this commodity as a linkage item would involve dealing with more than one FTO, because Rolimpex handles grain and oilseeds, while Ciech is in charge of sulfur sales. This might not be an insoluble problem, as another FTO, DAL, could be in charge of coordinating the transaction. However, Ciech officials noted unless production and transport problems limiting delivery of sulfur are eliminated, it would be unlikely that sulfur would be offered as a countertrade item.

G.D.R. has a reputation for being perhaps the most insistent on countertrade of the four countries in this study. Nahrung officials indicated they always raise the question of whether a seller would be willing to negotiate a countertrade arrangement. While not insisting on countertrade as an absolute condition for doing business, the agency would view favorably seller's willingness to pursue such arrangements. If a seller, in fact, negotiates a countertrade agreement, Nahrung officials said they would feel more disposed to buy grain from that firm.

However, potash and other possibly desirable import items appeared unlikely to be available. Although the East Germans showed interest in exporting farm machinery, traders in Vienna and other sources have voiced caution about countertrade arrangements involving G.D.R. machinery, due to high costs, unreilable delivery, and poor service.

Offical in the Embassy of the Hungarian People's Republic said their country had no special rules to encourage or require counterpurchase or other forms of countertrade as a condition for selling grain or oilseeds. They suggested countertrade might be encouraged at times by Hungary. In certain instances, they felt willingness by a Western firm to initiate such arrangements could enhance trade. However, no countertrade had been involved in grain purchases.

Officials interviewed in the Czechoslovakian Ministry of Foreign Trade expressed little enthusiasm for countertrade in agricultural import transactions. No official policy existed at the time to encourage countertrade. Selected FTO's engage in countertrade, but Koospol, which handles grain and oilseed imports, is not structured to handle such arrangements if they involve other FTO's. While Czech officials felt countertrade could improve the climate for exports, it was not felt likely such an arrangement could be implemented successfully.

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[41]Business International S.A., *Business Eastern Europe*, (Geneva: December 22, 1978, Vol. 7, No. 51), pg. 409.

[42]Business International S.A., *Business Eastern Europe*, (Geneva: October 5, 1079, Vol. 8, No. 40), p. 318.

[43]Business International S.A., *Business Eastern Europe*, (Geneva: July 27, 1979, Vol. 8, No. 30), p. 238.

Overview

Given the emphasis Eastern European countries have placed on Western firms to agree to countertrade, cooperatives engaging in direct sales in that region should be familiar with possibilities and drawbacks associated with such arrangements. While countertrade has not been a prerequisite to trade in grains and oilseeds with Eastern European countries, willingness and ability to accommodate or even initiate such arrangements might present a powerful marketing strategy to gain access to that market. However, complexity of such arrangements, together with the less than satisfactory record of the countries involved in being able to provide satisfactory quality, service, and delivery terms, would suggest extreme caution and skepticism before entering them.

Role of Market Promotion and Advertising

Market promotion and advertising have a much different scope in Eastern Europe than in Western countries. Media advertising and promotion are nearly nonexistent. Most activities of this sort are carried out in the form of technical seminars or symposia, or through exhibits or official representation at trade fairs, such as those held each year in Leipzig, G.D.R. Conducting symposia or exhibiting at trade fairs is probably a most beneficial means of establishing personal contact with import decisionmakers or those who influence such decisions.

Because establishing personal contacts is a major end of symposia, certain things are important to keep in mind when conducting these affairs. An important step is to exercise care key people are included in the list of participants. Allowing time for informal socializing before, after, or during such events also is important. A continuing series of symposia probably will be more useful than one-shot events, and follow-up work through additional contacts, including keeping participants on mailing list for future symposia, is important.

Technical seminars also are useful in describing the attributes of a firm's products and are perhaps the most successful and extensively employed promotional technique used in Eastern European trade dealings. However, the homogeneous nature of most grain and oilseed products makes industry-sponsored events through associations such as American Soybean Association, U.S. Feed Grains Council, and U.S. Wheat Associates more logical than those sponsored by firms.

A possibility not to be overlooked is that, in certain cases, official marketing agencies can assist a firm in organizing symposia or other promotional activities. These agencies can be located through the respective chambers of commerce in most countries in this study. They also conduct formal market research studies. It is difficult, though, to appraise how useful these services are, because apparently they have been used very little, if at all, by the grain industry.

Intra-COMECON Trade

Institutional Setting

Trade among member countries is determined within the framework of 5-year plans, which establish targets on mutual deliveries of goods for the entire period. Each member country signs a bilateral, intergovernmental trade and payments agreement with each COMECON trading partner. These agreements are renegotiated annually and their provisions elaborated in officially signed trade protocols. Protocols specify value of mutual trade, volume of individual commodity deliveries, quality standards, and prices of goods. Sanctions may be applied if delivery terms are not met to assure fulfilling sales and procurement targets set in foreign trade plans and stay within the hard-currency allocation.

Generally, intra-COMECON exchanges provide for a balance of exports and imports, because imbalances must be settled ultimately with either commodities or convertible currencies. As pointed out in the next section, International Bank for Economic Cooperation serves as a clearinghouse for the Bloc's trade accounts using the transferable ruble. However, shortage of hard currencies has kept the transferable ruble nonconvertible. Because national currencies are not convertible for foreign trade purposes, they serve only as accounting devices for transactions.

Factors Affecting Trade

Numerous factors have given impetus to growth in COMECON mutual trade, including intensification of economic cooperation and specialization in production among countries, desire to correct the chronic imbalance in trade with the West, and stagnation in economic growth in developed countries that dampened import demand. Moreover, intra-area trade was boosted by the rise in cost of energy and industrial raw material.

Some factors also tend to slow growth of mutual trade among member countries. For a number of commodities including agricultural ones, demand for imports is competitive rather than complementary, leaving limited opportunities to offset planning errors and scarcities through trade within the Bloc. Limited capacity to compensate for unforeseen domestic scarcities through trade within COMECON is a main reason Bloc countries are interested in enlarging their opportunity to trade outside.

Intensity of Trade

Intra-COMECON trade has shown uneven growth patterns. Mutual trade in terms of exports in 1980 ranged from 41 percent for Romania to 71 percent for G.D.R. Czechoslovakia sent 63 percent of its exports to COMECON partners; Poland, 54 percent; and Hungary, 52 percent (appendix table 11).

While the export dependence of Czechoslovakia and G.D.R. on COMECON country markets has changed little over the reference period, that of Hungary and Poland has diminished. Hungary had the lowest import dependence on COMECON partners, obtaining less than half its requirements in 1980. Poland, too, had a comparatively low dependence on area suppliers, receiving 54 percent of total imports from member countries. COMECON partners provided two-thirds of Czechoslovakia's and 61 percent of G.D.R.'s imports in 1980.

Commodity Structure

Manufactures including fertilizers, rubber, and other intermediate products accounted for more than half the total value of intra-area trade in 1978. More than four-fifths of manufactures consist of engineering products. Fuels, ores and metals comprised the second largest component of intra-COMECON trade; and raw materials and foodstuffs, the third largest.

The breakdown of commodities exported within COMECON in selected years from 1950 to 1978 is shown here:

Commodity Structure of Intra-COMECON Exports

	1950	1960	1970	1975	1978
	Percent				
Machinery and equipment	20	32	40	43	44
Fuels, ores, and metals	26	29	23	26	27
Raw materials and foodstuffs	32	20	14	12	10
Manufactured consumer goods	7	11	13	10	10
Chemicals, fertilizers, rubber, construction materials, and others	14	9	10	9	8

Of total COMECON countries' 1980 imports, intra-area exchanges accounted for 68 percent of machinery and equipment, 93 percent of coal, 68 percent of crude oil, 70 percent of iron ore, and 60 percent of rolled metals.[1]

Fuels, energy, and industrial raw materials dominate Eastern European COMECON members' imports from U.S.S.R., largely paid for by shipments of manufactures.[2] Both sides benefit from these trading patterns. Eastern European member countries obtain a large part of their raw material and energy needs from U.S.S.R. On the other hand, U.S.S.R. and other Communist Bloc countries have absorbed much of Eastern European member countries' exportable manufactures, which otherwise may not have found Western markets.

Czechoslovakia and G.D.R. normally import foodstuffs and industrial raw materials from Russia in exchange for industrial goods. Czechoslovakia's grain-import needs generally are obtained from COMECON trading partners, U.S.S.R., Hungary, and Romania. Leading suppliers to Czechoslovakia include Bulgaria for tobacco and U.S.S.R. for cotton. G.D.R. purchases, when available, corn from Hungary or Romania and wine from Hungary, Romania, and Bulgaria. U.S.S.R. is a principal supplier of cotton. A fourth of Poland's agricultural exports and a sixth to a fourth of agricultural imports are transacted with other COMECON countries. Poland imports grain from Hungary, U.S.S.R., and Romania and vegetable oils from G.D.R., Hungary, and Romania.

Poland has exportable surpluses of meat, eggs, and rapeseed and exports both meats and rapeseed oil to U.S.S.R.

Bulgaria and Hungary have exportable surpluses of grains, livestock products, fruits, and vegetables. U.S.S.R. has exports of vegetable oils, chiefly sunflower seed oil; cotton; furs; and some grain. Hungary sells grain, livestock products, fruits, and vegetables to Russia and imports in return, vegetable oils, cotton, barley, and oats from Russia. Hungary also has purchased sugar from G.D.R. and tobacco from Bulgaria.

COMECON Monetary, Financial, and Credit System

International Bank for Economic Cooperation

In its early stage of operation, COMECON provided facilities only for bilateral settlement of payments among member countries in the form of rubles. With this arrangement, member countries could not use rubles earned through a positive trade balance with one country to offset trade deficits with another. To correct this deficiency, International Bank for Economic Cooperation (IBEC) was established in 1963 to effect multilateral payments in transferable rubles. In legal terms, IBEC is an independent international organization managed by a board whose members are appointed from all members of COMECON.

The transferable ruble is an independent currency backed by 0.987412 gram of fine gold. Unlike national currencies, it is used only for interregional settlements through banking accounts. Moreover, the private persons may not use the transferable ruble for cash payment, as it is not issued in the form of bank notes and coins. It is convertible into national currencies at specified rates set by the central banks of member countries on the basis of agreements with IBEC.[3]

Thus, while trade values are expressed in transferable rubles, exporters of goods are being paid an equivalent of this amount

[1]United Nations Conference on Trade and Development, *Trade Relations Among Countries Having Different Economic and Social Systems and All Trade Flows Resulting Therefrom,*) Geneva: July 16, 1980), p. 6.

[2]United Nations, Economic Commission for Europe, *Economic Bulletin for Europe*, Vol. 31, No. 1 (New York: 1979), p. 100.

[3]Each member country is entitled to one vote, regardless of its share in the capital of the bank. Decisions of the bank's council on all questions under consideration have to be adopted unanimously.

in national currencies by banks entrusted with settlements in transferable rubles. Simultaneously, buyers of such goods pay an equivalent of this amount in national currencies to authorized banks. These settlements are effected through IBEC acting as a clearinghouse. Banks authorized in each member country carry a transferable ruble account, with IBEC serving as a pool for export receipts and a source for payments for imports. In each particular case, IBEC debits the buyer country's accounts with a specific amount of transferable rubles and credits the seller country's account with the same amount.

Countries that are not members of the bank also can participate in the multilateral system of payment of settlements in transferable rubles. However, firms, enterprises, or organizations from nonmember countries can participate in transferable ruble settlements only through their own banks.

IBEC also transacts banking operations in convertible currencies. The ruble is not convertible into currencies of countries that are not members of IBEC. However, IBEC establishes rates of Western currencies against the transferable ruble on the basis of a basket of 13 currencies, taking into account their market rate fluctuations against the U.S. dollar.[4]

International Investment Bank

International Investment Bank was established in 1970 by members of COMECON to serve as an international credit institution emphasizing investment funding.
In 1976, the scope of the banks activities was extended to help speed economic integration and cooperation among member countries, as set out in their respective 5-year plans for 1976-80. The bank's financial resources were created by contributions of member countries to its authorized capital, attraction of funds from member countries, and international money markets. A member's proportion of total mutual exports determines its contribution to authorized capital.

Economic Relations Among COMECON Countries

Trade and economic relations among COMECON countries have evolved in three phases. The initial phase, 1949-56, was a period of transition. Coordination of economic affairs of member countries was indirect, confined to promotion of mututal trade, exchange of scientific and technical knowledge, and cooperative development of some industrial branches. Trade among member countries was conducted in the form of bilateral, long-term trade agreements under COMECON's auspices. Scientific and technological cooperation extended from granting licenses to each other for producing specific goods to exchanging technical plans and scientists.

The second phase in development of economic relations among COMECON countries was 1957 through 1970. It was marked by a shift to coordination of national economic development plans and promotion of socialist division of labor. This phase of cooperation stressed improvement of the area's supply of fuels, energy, and some industrial raw materials and specialization in production of certain goods. Specialization and cooperation has taken two general forms, by country and commodity and by joint production.[5] Hungary has achieved some specialization in canned fruits and vegetables as well as wine, and Czechslovakia in sugar, beer, malt; and, together with Poland, in canned hams.

The beginning of the third phase of COMECON economic relations can be identified as adoption of the "Comprehensive Program for the Further Extension and Improvement of Cooperation and the Development of Socialist Economic Integration by the CMEA Member Countries" in July 1971. For brevity, this program is referred to as the "Comprehensive Program" and is to be implemented in stages over 15 to 20 years. It laid down principles for extending cooperation among member countries, covering production, trade, currencies, pricing, science, and administrative and institutional matters.

The principal lever in promoting overall cooperation and integration among COMECON countries was cooperation in planning and coordination of 5-year and long-term plans for economic development.

For the 1976-80 plan, a number of joint integration and specialization projects and programs of cooperation in production and science and technology were undertaken. Emphasis in these programs was on meeting COMECON countries' needs for fuel, energy, chemicals, petrochemicals, foodstuffs, and industrial consumer goods and for developing mechanical engineering.

To satisfy growing needs for primary commodities, COMECON countries have signed agreements on joint development of raw material resources and power industries. Participating countries share in financing, and creditors receive payment in products made by jointly built works.

Cooperation in agriculture was aimed at increasing production of grain, livestock, other agricultural products, and protein feeds.

[4]This basket is composed of the following currencies: U.S. dollar, pound sterling, Swiss franc, Deutschmark, French franc, Italian lira, Dutch guilder, Belgian franc, Swedish krona, Danish krona, Canadian dollar, Austrian schilling, and Japanese yen.

[5]A description of the nature and form of intra-COMECON specialization and coordination in production in various fields is provided in U.N. Department of Economic and Social Affairs, *Economic Integration and Industrial Specialization Among the Member Countries of the Council for Mutual Economic Assistance*, (New York, 1966), pp. 17-28.

General Overview

Agriculture in COMECON countries is composed of collective, state, and small-scale household farms. The last category involves activities members of collective farms, workers, and employees carry out, partly as a hobby. These small-scale undertakings help meet consumer demands collective and state enterprises cannot satisfy and provide a supplementary source of income to the people involved.

To improve the economic performance of agriculture, COMECON countries have applied various incentives and promoted concentration and specialization among farm enterprises.

Farms were consolidated into larger units to improve production efficiency through economies of scale and allow better use of resources. These larger units were expected to specialize in line with comparative advantages. In addition to being horizontally integrated, farm units were vertically integrated with industrial processing, transport, and marketing enterprises. G.D.R., Bulgaria, and Hungary have made the greatest strides in establishing vertically integrated organizations.

Czechoslovakia

Organization of Production

In 1980, 63 percent of farmland was controlled by collectives, more than 31 percent by state farms, and the remainder, mostly marginal areas, by private owners. Nearly 70 percent of agricultural production was carried out by 1,722 collective farms with an average size in 1980 of 2,486 hectares.[1]

Vigorous efforts were made beginning in 1974 to promote merger of collective farms for concentration and specialization of agricultural production.[2]

Official reports indicate the large majority—about 85 percent of agricultural enterprises—had reached the size considered large enough to take advantage of modern large-scale production.[3] Admittedly, however, consolidation of collective farms was accompanied by some shortcomings.

Costs have tended to outrun the gain in efficiency. Many merged enterprises continued engaging in diversified production instead of shifting to production concentration and specialization. Insufficient attention has been given to developing interfarm joint agricultural enterprises.

Two forms of cooperation exist among collective farms—simple limited undertakings and joint agricultural enterprises.

Simple forms of cooperation do not involve creating a new organization, and participating farms may confine cooperation to joint use of machinery, adopt common rotation regardless of farm boundaries, and specialize production.

Joint interfarm enterprises involve establishing a new legal entity, although member collective farms retain their economic and legal independence. These enterprises consist mainly of large-scale hog, poultry, and in some areas, dairy farms. In crop farming, joint enterprises are established to provide farms with agrotechnical services, fodder-drying facilities, and mixed feed production facilities, and to arrange for processing of potatoes, other vegetables, and fruit.[4]

Official encouragement is given for developing cooperative relations between agriculture and the processing industries. Intensifying relations between these two sectors, it is felt, can help secure raw material requirements for processing, eliminate socio-economic differences between industrial workers and collective farmers, and facilitate merger of the two forms of socialist ownership.[5]

Marketing of Farm Products

Only specifically designated and authorized purchasing organizations are permitted to purchase agricultural products. Certain types of agricultural products are purchased by several purchasing organizations. The principal tasks of the main purchasing organization is to establish a common buying procedure for all purchasing organizations.

Purchasing organizations are obligated to buy the entire market output of products of special economic importance, even when the quantity is greater than agreed on or when the agricultural organization has produced a product without a contract.

Farm products are divided into two categories, those handled exclusively by state purchasing organizations and those that

[1]The Agricultural Cooperative Law of 1975 gave further impetus to mergers by allowing the state to take a stronger managerial role in cooperatives. A second law in 1975 authorized cooperatives to use privately owned land without compensation to owners.

[2]Size of collective farms has been increasing rapidly. In 1970, the average size of collective farms was only 638 hectares. The average size of 203 state farms in 1980 was 6,795 hectares.

[3]"For Greater Efficiency in Agricultural Production...," *Rude Pravo*, (Prague, Czechoslovakia: April 10, 1978), p. 1.

[4]United Nations, Economic Commission for Europe, *The Role of Cooperation in Agriculture and in the Food Industry in Czechoslovakia*, Agri/Sem. 11/R.6 (Summary) (Geneva: February 19, 1980), p. 2.

[5]Frantisek Zahlava, "Trends in Agroindustrial Integration Management,...," *Politicka Economice* (Prague, Czechslovakia: August 1980), p. 781.

may be sold freely by producers. Farm products subject to state trading are considered of nationwide economic significance. These include grains, oilseeds, legumes, slaughter animals, milk, sugar beets, tobacco, and several others. Selling prohibitions also extend to sales to other agricultural organizations or their exchange for other agricultural products. Seeds and feed grains, however, may be traded between member organizations of collective associations, or between a joint agricultural enterprise and its organizations, or sold to members of "unified agricultural cooperatives."

Other agricultural products, such as potatoes, vegetables, fruits, eggs, and the like may be sold by producers to purchasing organizations, to other users of the Socialist sector, or to people for their own consumption.

Trade in Livestock and Other Farm Products

The livestock industry has been characterized by advances in concentration and specialization of production and processing.

Concentration is well advanced in specialization of breeding and fattening of livestock and also is underway in the meat industry. These developments make it easier for purchasing organizations to locate their sources of supply of slaughter animals or buyers of feeder livestock. The meat industry began to purchase animals for slaughter on January 1, 1978. State breeding enterprises purchase animals for breeding and feeding.

Meat industry organizations may enter production and delivery contracts with small breeders for mutton and lamb, hogs, and beef and the poultry enterprise for slaughter geese and rabbits. Agricultural Purchasing and Supply Enterprise will sell feed to small breeders, solely on the basis of a written document attesting to this right by the purchasing organization that concluded the feed contract.[6]

German Democratic Republic

Organization of Production

G.D.R.'s agriculture is composed of collective farms, state farms, interfarm cooperation associations, large cooperation associations, agro-industrial complexes, and cooperative unions. Complementing the work of production units is the agricultural supply sector, made up of agricultural chemical centers and farm machinery repair and maintenance centers.[7]

Since the 1960's, G.D.R. has directed farm policy toward creating larger and more efficient farm units. Concurrently, both state and collective farms were merged into larger units, resulting in a significant increase in the average size of farms, although they still remain the smallest in Eastern Europe.

Collective farms take up 87 percent of total cropland, 7 percent in state farms, and the rest mostly in smaller individual units in hilly areas not suited for collectivization. The main function of state farms is to research crop and livestock production and to supply production requirements, such as seeds and breeding stock, to collective farms engaged in commercial production.

Since 1971, a new organizational trend has emerged, emphasizing production specialization. Livestock production is to be separated from crop production, and specialization is by type of livestock. In crop production, the new organizational form is the large crop-producing unit, formed by merger of three to five collective or state farms.

Directives set for the 1976-80, 5-Year Plan for agriculture gave priority to "the industrialized production of crops and livestock products on specialized cooperative farms, state farms, and large-scale establishments involving both cooperative and state-run enterprises."[8] In line with these directives, farm mergers continued, and large, specialized collective crop farms, specialized collective and state livestock farms, and mixed crop and livestock farms were established. By 1980, there were 1,448 crop operations, with an average farm size of 5,000 hectares and 3,568 livestock operations, with an average farm production of 1,500 livestock units.

To enhance gains from specialization, formation of interfarm cooperation associations was encouraged for crop and livestock production and for performance of various agricultural tasks. All types of farms are cooperating in interfarm organizations set up for such purposes as irrigating, fodder dehydrating, building, etc. Farms participating in interfarm cooperation associations pool their land, financial,

[6] "Fattening Under Contract on the Part of Small Breeders," *Zemedelske Noviny* (Prague, Czechoslovakia: June 14, 1979), p. 3.

[7] Agricultural chemical centers are responsible for production and supply of fertilizers and plant protection chemicals. They also carry out much of plant protection work. Regional enterprises for farm machinery repair and maintenance service all machinery owned by collectives and state farms. At harvest time, their specialists are sent to farms to be available any time they are needed.

[8] Horst Sindermann, "On the Directives for the Five-Year Plan for the German Democratic Republic's National Economic Development 1976-80," *Verlag Zeit an Bild Dresden*, (German Democratic Republic: May 1976), p. 37.

material, and labor resources but retain their legal and economic independence.[9]

Interfarm cooperation associations for livestock production began specializing in milk production, hog and cattle feeding, heifer rearing, and poultry and egg production. The state provided substantial financial support for constructing large-scale livestock complexes operating on an industrial basis. To improve overall production efficiency, measures were taken to promote integration of the crop and livestock sectors.

Two methods were applied. One involved creation of large cooperation associations by specialized crop-producing and livestock-producing collective farms. Collaborating farms then set up joint enterprises for processing fodder crops produced by the crop collective and joint enterprises for fattening livestock raised by the livestock collective.

A second approach to integration is establishing agroindustrial complexes by unifying specialized interfarm cooperation associations, notably those for crops and livestock. Because most specialized collective associations are alreayd large, agroindustrial complex units operate on a large scale. Members of the complex also set up interfarm enterprises for livestock feeding, dairying, and feed manufacturing. The complex also may have an agrochemical center.

G.D.R. also has established a number of vertically integrated production units called cooperation unions.[10] These unions can be composed of cooperative farms, state farms, interfarm enterprises, specialized production associations, industrial processing enterprises, trade organizations, transport associations, other service enterprises, and the like.

All members of a cooperation union retain their economic and legal independence, although the union itself is a legal entity and operates as an economic organization. Joint projects are financed through a joint financial fund.

Cooperation unions are engaged in production and processing of livestock products and poultry, notably meat and milk, and of vegetables, fruit, and jam.

Marketing of Farm Products

The government fixes prices for agricultural products for the 5-year national plan to guarantee a profit on each product.

There are reports of planned reforms in the agricultural pricing system. To increase production, producer prices will be increased to cover actual cost of production.

The final plan includes output targets, delivery amounts for all main products, costs, and investments. For selected crops and livestock products, a regional and countrywide plan-fulfillment index is distributed to local authorities, and compliance is supervised. Grains, potatoes, sugarbeets, mutton, poultry, beef, milk, and eggs are marketed through government procurement. Farms make delivery contracts directly with government agencies, specifying quantity and price. The state grain industry procures grain. Production in excess of the contracted quantity can be marketed privately.

Contract buying and imports allow the government to secure raw material for food milling, mixed feed, and other processing industries and to supply grains to farms in deficit and commercial feedlots. Developing larger sized farms has resulted in greater reliance on contract relations between them and has contributed to greater government control over their planning. Hence, overall flexibility and autonomy of the system has been reduced. Indications are for some turning away from large-scale, specialized production to smaller, traditional livestock enterprises. Underlying this change is the apparent high cost of production in large-scale units relative to smaller ones.

Policy measures attempt to reduce the large imbalance between profitability of crop and livestock sectors. Also, beef production apparently is stimulated at the expense of pork production.

Hungary

Organization of Production

State farms, collective farms, household plots of collective farm members, and auxiliary or private farms carry out Hungary's agricultural production. Official policy in the early 1970's had been to promote concentration and specialization of production through merger of collective farms and consolidation of state farms. As a result of this concentration process, the nation in 1980 had 131 state farms and 1,338 collective farms, averaging 7,600 hectares and 3,900 hectares, respectively.

State farms held 13 percent of agricultural land and collective farms, 78 percent, of which about 6 percent was in household plots. The remaining 9 percent was cultivated by industrial workers, professionals, and other part-time farmers. State farms accounted for 21 percent of gross agricultural output, collectives for 69 percent, and private farms for the remainder.

[9]Everett M. Jakobs, "Recent Developments in Organization and Management of Agriculture in Eastern Europe," *East European Economies Post-Helsinki*, (Congress of the United States, Joint Economic Committee, 1977), p. 348.

[10]G.D.R. has so far made the greatest strides toward vertically integrated forms of agricultural production.

Along with concentration and specialization drives, modernization of the entire food industry through introduction of industrialized production methods and techniques was stressed. Increasing the share of processed foods for domestic consumption and exports was given priority.

Large-scale state and collective farms organized in these years, however, did not turn out to be more cost efficient than smaller ones.[11] Farm enlargement by itself has not resulted in greater production concentration or specialization. Morever, problems arose in coordinating activities among farms.

To foster improvement in production efficiency, a new organizational form, the closed production system, was developed. Closed production systems are essentially forms of horizontal integration designed to facilitate introduction of the most modern methods of production and processing of agricultural products. In 1978, 76 production systems were in operation.[12] The organizer or system manager of the production systems is often a leading state farm that associates through contracts a number of state and collective farms supplying land, production facilities, and labor. The organizer supplies partner farms with machinery, maintenance, other production inputs, and technical services and organizes marketing and personnel training.

Large-scale farm enterprises may become members of several production systems at the same time. Participating farms retain great independence but are expected to implement recommendations of the leading enterprise. Member farms compensate the system manager for services through a commission in cash or in kind.

Production systems are in operation for crop and livestock production. In the crop sector, the corn production system has been the most widely accepted, followed by systems for wheat, sugar beets, sunflowers, alfalfa, potatoes, soybeans, and rice. On the whole, these organizations are highly mechanized and have obtained good results in raising yields and improving efficiency of poultry and egg production.[13]

Hindering spread of new production systems are inadequate material, financial, and managerial resources for efficient operations; shortage of hard currency to buy modern technology and other inputs from Western sources; and government measures that shift part of operating costs to member farms by raising cost of fertilizers and other chemicals.

Collective farms are allowed to engage in vertical integration by setting up auxiliary activities. Financially strong collectives operate their own subsidiary enterprises, while weaker ones form joint undertakings with other farms or enterprises.

Progress in vertical integration between collective farms and state enterprises has been slower than anticipated. Differences between growers' and processors' interests are major hinderances to greater integration.[14] High concentration of the Hungarian food industry is another factor inhibiting integration between collective farms and food-processing enterprises.[15]

Since 1976, experimental agricultural combines and agroindustrial associations have been established in four regions. An agricultural combine is established by merger of several vertically integrated units under a single management. Most prominent among such organizations is the Agricultural Combine at Babolna. An agroindustrial association is formed through close cooperation of industrial plants and state and collective farms. The aim is to integrate vertically agricultural production, processing, and marketing for utilization of resources in a given region.

Marketing of Farm Products

State purchasing and processing enterprises offer a purchase contract to producers who, however, are under no compulsion to sign an agreement. Contracts have basic provisions the parties must observe, while fulfillment of other provisions may not be enforced.[16]

Sale and purchasing regulations differ by commodity groups. Trade in food grains, slaughter cattle, calves, pigs, tobacco, raw wool, and paprika is restricted. Producers of these products can sell them only to designated purchasing and

[11]F. Donath, "A kollectivizalt mesögardaság iparosodàsa Magyarországon," *Közgazdasági Szemle*, (Budapest, Hungary: No. 6, 1976), pp. 644-665.

[12]These organizations accounted for more than 2 million hectares of area under crops (about 40 percent of the total), as well as for 22 percent of cattle, 50 percent of pigs, and 26 percent of area under vineyards. *Agra-Europe*, June 1, 1979, p. N/1.

[13]Most successful in livestock production is the Babolna Agricultural Combine. Using U.S. technology, it breeds hybrid poultry and produces broilers and eggs for sale on Western markets.

[14]For example, grower interests are influenced by timing harvests to optimize yield and quality of crops, but processors prefer a steady flow of deliveries that reduce storage costs and even out the production process.

[15]For other considerations discouraging vertical integration, see 2. Edward O'Reilley, "Hungarian Performance and Policy During the NEM," *East European Economies Post-Helsinki*, (Washington: Congress of the United States, Joint Economic Committee, 1977) p. 372.

[16]Purchasing agencies can refuse to accept products not meeting the quality standard and also can request the purchase be postponed because of adverse market conditions.

processing enterprises.[17] Designated enterprises are required to purchase the entire amount offered. For grains, pulses, hay, straw, and green-forage feed, contract delivery quantities may deviate 10 percent to allow for fluctuation in production.

Grain Trade

Agencies of the Grain Trust purchase food grains for milling or trading and also must store grains. Purchases are made at fixed prices. Seventy percent of the national wheat output is purchased by agencies of the Grain Trust. The amount traded among agricultural producer enterprises is in the range of 300,000-400,000 tons.[18]

The feed grain market is controlled indirectly by state authorities. Target prices are established and are binding for state enterprises and collective farm units but not for small producers and consumers. To maintain the target price level, the grain industry may undertake intervention buying or selling.

Livestock Marketing

Slaughter animals, cattle, hogs, sheep, and horses are produced under contract. Sale and processing of slaughter cattle is a state monopoly vested in the Livestock Marketing and Meat Industry Trust. Procurement prices remain fixed for a year, regardless of changes in market conditions. Cattle purchased for export may bring premium prices.

The pork trade is regulated through designating marketing channels and fixing meat and slaughter hog prices. The regulatory function is performed by agencies of the Livestock Marketing and Meat Industry Trust.

Poultry, eggs, pigeons, and rabbits are raised under contract, with a 12-percent range allowed in the quantity delivered. The state purchases live poultry at the support price. Milk and milk products also are produced under contract, with a 15-percent range in the quantity that may be delivered. The producer price is fixed, but this restriction does not apply strictly to products sold directly by producers.

[17]An exception to this restriction is made for agricultural producer enterprises and small-scale consumers when purchasing food grains and hogs for their own consumption.

[18]Bread grains used for personal consumption by producer units is a mere 40,000 to 50,000 tons.

Poland

Organization of Production

Polish agriculture is composed of four forms of ownership; individual, collective, group, and state. Poland is the only COMECON country where private farming is the dominant sector.

Private-sector farming has shown a slow but gradual decline. Private farmers held 83 percent of cultivated land in 1970, but the proportion was down to 66.4 percent in 1979. In large part, this decline reflects government efforts to strengthen the socialized sector by priority allocation of credits, investments, and farm-production inputs.

For example, past bias against the private sector is shown in the level of mechanization of agriculture.[19] Expansion of public agriculture also is being promoted by encouraging private farmers to give up their land in exchange for pensions.[20] Authorities have tended to annex their land to state or collective farms instead of selling it to other farmers. A generally discriminatory policy toward the private farm sector has weighed heavily against long-term investment in private farms, even when funds have been available. A tendency exists to spend incomes for consumption rather than investment.

Moreover, Polish agriculture is handicapped seriously by an overall shortage of production inputs and inadequate infrastructure. These, together with antiquated farming methods, keep agricultural productivity at comparatively low levels.[21] Agricultural mechanization did not keep pace with the decrease in agricultural employment during the second half of the 1970's, and investments that would be needed to meet the demand for tractors apparently were beyond the means of the budget.[22]

An interesting new feature of Polish agriculture is evolution of specialized farms concentrating on specific crops or on meat or milk production. Some 117,000 such farms now exist, and the 1985 goal is to have 400,000 of them with an average size of

[19]For example, one tractor was available for 74 hectares on private farms, one for 29 hectares on collective farms, and one 40 hectares on state farms.

[20]Beginning July 1, 1980, a retirement system for farmers was introduced that may speed up land transfers and restructuring of land holdings. An estimated 450,000 farmers are anticipated to give up their farms by 1985 to a younger generation likely to adopt more modern farming methods.

[21]In terms of productivity, as illustrated in grain yield levels, Polish agriculture is the least developed of any Eastern European COMECON country.

[22]*AgraEurope*, July 15, 1980, p. N/4.

15-20 hectares instead of the prevailing private size of 10-12 hectares. A fourth of these farms would be devoted to plant production and the rest to livestock output.

Specialized farms enter into contracts with the state, assuming production and sales quotas. On meeting these quotas over a 3- or 4-year period, investment credits received from the state are canceled.

State farms are entrusted with three major tasks, producing marketable products, developing seeds and breeding livestock, and establishing various forms of production cooperation with private firms. State farms play an important role in market production of grain and as suppliers of young beef cattle for export. They produce selected seeds and breeding livestock, made available to private farmers at prices below production cost. State farms specialize in certain activities. They include production farms,[23] those producing breeding material for agriculture,[24] those engaged in fresh-water fishing, voivodship centers for technological advancement, farms belonging to scientific research institutes of the Ministry of Agriculture, and agricultural-industrial associations.

Collective farms are organized similarly to those in other COMECON countries. Because there is too little land per family, members of collectives are forced to carry out various nonagricultural activities, such as fruit and vegetable processing, building-material production, and various types of services.

Also cooperation farms exist, involving only common use of machines and farm structures and some cooperation in crop and livestock production.[25]

Marketing of Farm Products

To get farmers to fulfill agricultural production targets in plans, the government applies direct and indirect incentive measures, including controlling prices farmers receive for their products and those of inputs they buy, contracting for production, allocating investments and subsidies, setting supply and terms of credit, and levying taxes.

Both producer and retail food prices, except for products sold in local markets or in small private shops, are controlled by the government. These are called administrative prices. In principle, prices paid to producers should be adjusted to the rise in production costs or raised as a means of stimulating production. In practice, price increases often were allowed only after production started to decline from lack of profit.

The contract-buying system plays a dominant role in incorporating individual farmers into the socialized, planned economy. Some industries, such as sugar, tobacco, brewery, fruit and vegetable, potato, and poultry, do their own contracting with producers.

In general, contracts specify amount and quality of products the producer undertakes to produce, and place and time of delivery. The purchasing enterprise, in turn, agrees to take over the contracted quantity of products and pay the pre-established price. It also provides the farmer with credit for purchase of production inputs and supplies certain breeding stock, pesticides, and information on the best production techniques. In recent years, more than 80 percent of marketed crops and livestock was sold to the state under contract.[26]

A troublesome feature of the food-agriculture sector until 1981 was the wide disparity between producer prices and retail consumer prices for certain staple foods. Retail prices for such staple foods as milk, sugar, and some meat- and grain-based products had not changed for the past dozen years. Stimulated by improved purchasing power, increasing population, and stable retail prices, consumer demand tended to press hard on food supplies, especially meat. Despite raising producer prices for livestock, Eastern European countries maintained relative prices at levels creating disincentives for production, especially on small private farms.

Maintenance of stable retail prices of basic foodstuffs, increased consumption, and higher producer prices resulted in a sharp escalation of food subsidies. In 1979, consumer subsidies on food represented 16 percent of the national budget.[27]

By 1981, government subsidies had reached nearly $11 billion, or more than a fourth of total budgetary outlays. In 1981 and 1982, the government implemented major price reforms to bring about a better balance in the food market and reduce subsidies to agriculture and the food economy. The 1981-82 political crisis suggests the general disorganization of the economy, including agriculture, cannot be remedied without regaining the people's confidence. Despite some concessions in 1982, farmers were still distrustful and uncertain of the government's policy.

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[23] Grouped in 16 regional associations.

[24] These are grouped into the following associations: plant breeding and seed, livestock breeding, and gardening seed and seedlings.

[25] Elaboration of this and other types of Polish cooperation farms is contained in A. Wos' and Z. Grochowski, *Recent Developments in Polish Agriculture*, (Interpress Publishers: Warsaw, Poland, 1979) pp. 53-77.

[26] *The Journal of Commerce*, (New York, June 19, 1980), p. 9 and *AgraEurope*, June 27, 1980, p. N/16.

[27] A.M. Derevanny, "Agriculture's Role in the Polish Drama: Part 1." *Feedstuffs*, November 3, 1980, p. 7.

APPENDIX 3. EASTERN EUROPE TRADE PATTERNS

The combined trade of the Eastern European nations expanded about twlevefold over the period 1960-81, with imports generally outpacing exports (appendix table 10).

By the mid-1960's, Eastern European COMECON members were confronted with slowing growth rates in both industry and foreign trade. The situation changed in the second half of the 1960's. Foreign trade turnover of member countries began to accelerate, maintaining momentum through the 1970's. This reflected the upswing in economic activity that stimulated imports and simultaneously created increased export potential. In the period 1971-75, foreign trade turnover had grown much faster than national income and industrial production, exceeding targeted growth rates in most countries in the region.

Each country's trade in the second half of the 1970's continued to grow briskly, showing COMECON countries were assigning an increasing role to international trade in their overall development.

U.S.S.R. was the dominant trading partner, generating about 49 percent of COMECON exports and absorbing about 45 percent of total imports in 1980. G.D.R. is the second largest COMECON trading nation and Poland, third largest, accounting respectively for 11 and 12 percent of the area's exports and imports. Czechoslovakia ranks fourth, followed by Romania, Bulgaria, and Hungary. Czechoslovakia recorded the smallest export growth rate among COMECON nations.

Trade Balances and Indebtedness

COMECON countries have been accumulating a growing deficit in their overall trade during the 1970's, incurred mainly in trade with their partners outside the area, particularly with developed market economy countries (appendix table 11). The deficit within this group of countries rose from about $1 billion in 1970 to $6.6 billion in 1979. In contrast, COMECON nations achieved a record $6-billion trade surplus with developing countries.[1] Since the mid-1970's, COMECON countries' exports have been increasing faster than imports from these countries.

The most striking examples of deterioration in trade balances have been Poland and G.D.R. Poland's global trade deficit grew continually from 1970 to 1976 but was reduced to $2.0 billion in 1981 and a $1.0 billion surplus in 1982, largely attributable to a scaling down of deficits with developed market economies. In trade with COMECON countries, Poland, also, had incurred moderate deficits in recent years. These, however, were more than compensated for by trade surpluses with developing countries until 1978.

G.D.R.'s overall deficit increased continually from 1973 to a high of $2.3 billion in 1977 but was brought down to $323 million in 1981. This decline essentially was due to improvements in trade balance with other COMECON and developing countries (appendix table 12). Preliminary estimates suggest the 1982 deficit may have been relatively large.

Czechoslovakia's trade position turned deficit in 1973, reaching a record $1.1 billion in 1979. Subsequently, the deficit was reduced and in 1981 and 1982 Czechoslovakia posted $228 and $70 million surpluses respectively. Czechoslovakia, like other COMECON partners, realized trade surpluses with developing countries.

Hungary's trade accounts, except in 1972-74, were deficit in the 1970's, soaring to a high of $1.6 billion in 1978. This large deficit is due to trade with developed market economies and to a lesser extent with other COMECON countries. Hungary succeeded in reducing its 1982 deficit to $410 million.

The balance of trade in agricultural products had a significant effect on the size of the overall trade balances of each country in this study. Agricultural imports seriously increased the magnitude of deficits for Czechoslovakia, G.D.R., and Poland and mitigated the imbalance in trade for Hungary. Widening agricultural trade deficits in these countries was due the failure to meet agricultural production growth targets. Only Hungary recorded a rising agricultural surplus in line with the growth of agricultural production.

The United States achieved growing surpluses in trade with the four COMECON member countries in the 1970's, reaching record highs in 1977-80 (appendix table 13). The surplus was reduced sharply in 1981, due to a drop in U.S. exports, in part reflecting the desire of COMECON countries to bring their international accounts into better order. Our large trade surplus with COMECON countries primarily is due to the wide gap between agricultural exports and imports (appendix table 14).

Deterioration of COMECON countries' trade balances seems to have been caused by a combination of factors, such as heavy capital investment programs requiring huge imports; growth of imports of certain consumer goods geared to a buoyant domestic demand; slowing of Western growth; oil price increases since 1973; and widespread harvest failures during 1971-79, necessitating massive imports of grain and feedstuffs to be paid for in hard currencies.

Poland and G.D.R. in particular have made great strides in the late 1960's and early 1970's in modernizing their industries.

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[1]General Agreement on Tariffs and Trade, *International Trade, 1978/79*, (Geneva, Switzerland, 1980), p. 162.

This has created an increasing demand for imports of Western machinery and industrial inputs. These industrial programs were undertaken in the expectation the surge of economic activity in the West would provide ready and expanding markets for Eastern products. However, efforts to boost sales to the West so far have had mixed results, generally developing more slowly than anticipated.

U.S.-COMECON Agricultural Trade

Overall Level of Trade

Despite large year-to-year fluctuations, value of U.S. agricultural exports to COMECON countries has increased significantly since 1972. Much of the variability is attributable to crop shortfalls. The United States shipped a record $4.6 billion in agricultural commodities to COMECON countries in 1979, of which $1.7 billion went to Eastern European destinations. Farm exports to Czechoslovakia and Poland in 1979 and to G.D.R. and Romania in 1980 broke previous records, due to a significant increase in shipments of grains, soybeans, and oilseed meal. In 1981 and 1982 respectively, the United States shipped $3.5 billion and $2.7 billion of farm commodities to COMECON markets.

Imports of farm products from COMECON, mainly of Eastern European origin, have shown a more stable pattern, rising gradually from $37.2 million in 1960 to $289 million in 1981 and $239 million in 1982. U.S. agricultural imports from COMECON thus cover only a small portion of the value of farm products these countries purchase from us.

U.S. Exports

Farm products are the major part of U.S. exports in COMECON, though their importance varies widely among member countries and has shown marked changes over the period 1960-81 (appendix table 15). Hungary was the only COMECON country whose imports from the United States in 1981 and 1982 were not largely agricultural. U.S. exports to G.D.R. consisted almost entirely of farm products, representing 92 percent of the total in 1982. Agricultural products accounted for 62 percent of total U.S. exports to Poland and 55 percent of those to Czechoslovakia in 1982.

U.S. Imports

U.S. imports from COMECON countries consist largely of nonagricultural goods. Machinery; equipment; manufactured goods, including consumer manufactures; and coal were the major U.S. imports from Poland. Manufactures, machinery, and transport equipment dominate U.S. imports from Czechoslovakia and Hungary. U.S. purchases from G.D.R. concentrated on chemicals, machinery, transport equipment, and manufactured articles.

Agricultural products contributed a diminishing proportion of U.S. imports from COMECON countries. In 1982, their share of total U.S. imports ranged from G.D.R.'s 5 percent to Poland's 33 percent.

U.S. Agricultural Exports

Poland is the second largest COMECON country and the top Eastern European market for U.S. farm products. G.D.R. ranked third and Czechoslovakia fifth as COMECON markets for U.S. farm products. Bulgaria and Hungary provided the smallest COMECON outlets for U.S. farm products in the period under review.

U.S. agricultural exports to COMECON countries are concentrated in a small number of commodities. Wheat, coarse grains, oilseeds, and oilseed cakes and meals accounted for more than four-fifths of total U.S. value of exports to Eastern European member countries in the 1970's.

Among these four products, grains represent the chief U.S. farm export to COMECON. Poland and G.D.R. were the main Eastern European destinations for wheat. G.D.R. was the only Eastern European market for U.S. wheat, purchasing 108,000 tons in 1982. Poland has usually been the largest buyer of U.S. wheat (appendix table 16 and appendix fig. 1.).

Feed grains, principally corn, were the largest U.S. grain export to all COMECON countries except Hungary. Poland and G.D.R. head the list of Eastern European buyers, both regular customers of U.S. feed grains. In 1981, they purchased 2.2 million tons and 1.6 million tons, respectively (appendix table 17 and appendix fig. 2). Purchases in 1982 had declined to 1.4 million and 0.4 million tons, respectively. Czechoslovakia was an occasional buyer of U.S. feed grains, making its biggest purchases in 1979. Hungary purchased only small quantities of U.S. feed grains. Growth in U.S. grain exports to Poland and G.D.R. were, in part, related to formal and informal understandings reached with both countries.

Eastern European countries provided only small markets for U.S. oilseeds (appendix table 18 and appendix fig. 3). In contrast, oilseed meals were the leading U.S. agricultural exports to Hungary until 1980. G.D.R., Bulgaria, and Yugoslavia were the main destination for oilseed cake and meal in 1982.[2] Czechoslovakia, Poland,and Romania have been substantial consumers of U.S. oilseed cake and meal, but purchases vary greatly from year to year. Hungary provided the smallest market for oilseed cake and meal and procured all requirements from Brazil in 1981 and 1982 (appendix table 19 and appendix fig. 4). Underlying growth in U.S. oilseed cake and meal exports is developing modern feed

[2]Some U.S. soybean meal reaches G.D.R. through West Germany and the Netherlands.

industries and progrms, expanding hog and poultry industries, and shortage of domesticallly produced competing meals in Eastern Europe. Cooperation by U.S. industry representatives, too, has been a major factor in expanding U.S. trade in soybeans and meal.

Cattle hides and cotton make up the bulk of the remainder of U.S. agricultural exports to Eastern Europe. All COMECON countries purchase U.S. cattle hides, with Czechoslovakia and Romania being the leading customers (appendix table 20 and appendix fig. 5).

U.S. Agricultural Imports

Processed meat is by far the most important U.S. agricultural import from all Eastern European countries, except Bulgaria and G.D.R., accounting for 75 to 85 percent of the value of total imports. Poland is the main source of U.S. agricultural imports from Eastern Europe. Hungary is second, followed by Romania (appendix table 21 and appendix fig. 6). Poland supplied 30 percent of U.S. agricultural imports coming from Eastern Europe in 1982. Processed meats made up 84 percent of total agricultural imports from Poland in 1982. The remainder of U.S. agricultural imports from the COMECON area is made up of diverse specialty commodities, such as tobacco, fruit and vegetable preparations, fur skins, and cheese.

Industrial Cooperation Arrangements

Industrial cooperation includes a variety of activities conducted over a specified period between Eastern and Western partners. The activities may be divided into two categories. The first include setting up new industrial capacities or modernizing existing ones. Such cooperation involves supplying capital equipment and related services for establishing industrial enterprises in Eastern countries. It also includes transfer of Western licenses and know-how related to capital equipment delivered.

The second category of industrial cooperation arrangements involves joint activities in producing specific goods. These deals may take the forms of subcontracting, coproduction, and production sharing or specializing, and establishing joint ventures.

Industrial cooperation projects based on Western supply of capital equipment represent a fifth of all industrial cooperation deals between COMECON and Western countries.[3] In the majority of cases, these projects were concentrated in high-technology industries, notably engineering, metallurgical, chemical, and electrical, and in energy and fuel production.

Generally, industrial cooperation agreements provide for compensation arrangements, with delivery of resultant goods to Western countries.

Eastern European countries prefer coproduction and subcontracting of cooperation arrangements using existing industrial capacities. Under coproduction, the partners coordinate efforts for joint production of a certain range of goods and exchange a part of joint production. This form accounts for about 40 percent of industrial cooperation projects in COMECON countries contracted with Western partners.[4] Subcontracting involves production, delivery, and assembly of component parts of machinery and semimanufactured goods. This form of industrial cooperation represents less than 10 percent of all such East-West arrangements.[5] A unique form of industrial cooperation is the joint venture established inside the COMECON area and in third countries.[6] A new type of this form of cooperation is the tripartite industrial cooperation scheme, involving participation of partners from COMECON countries, developed market economy countries, and developing countries.

Joint ventures involve sharing management, ownership of capital investments, profits, and risks.[7] Goods produced by plants established as joint ventures may be marketed either through joint trading companies or separate Eastern and Western companies.

Joint ventures are most pronounced in trade, marketing, transport, insurance, and banking. In recent years, several joint ventures in the form of mixed companies were established in Western countries with equity participation of COMECON countries' FTO's.[8] Principal activities of the majority of these companies are marketing- and trade-related servicing of COMECON countries' products in Western countries.

Mutual exchange of licenses for technology transfer is gaining momentum in East-West industrial relations. Licenses are being purchased for manufacture of certain goods with payment in products. Also, licensing arrangements may be for

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[3]United Nations Conference on Trade and Development, *Trade-creating Industrial Cooperation Among Countries Having Different Economic and Social Systems*, TD/B/806, (Geneva, Switzerland, August 14, 1980), p. 9.

[4]Ibid., p. 10.

[5]Ibid.

[6]By 1980, more than 400 joint companies were established by COMECON countries and developed market economy countries in the West, more than 10 in the COMECON countries, and more than 100 in developing countries with the participation of COMECON countries.

[7]For a discussion of perceived advantages of entering a joint venture between Eastern and Western parties, see Pompiliu Verzariu and Jay A. Burgess, *Joint Venture Agreements in Romania: Background for Implementation*, (U.S. Department of Commerce, Bureau of East-West Trade, June 1977), pp. 3-6.

[8]COMECON parent enterprises either have more than 50 percent equity holding or sole ownership of a majority of such companies.

assembly of goods with parts supplied by Western firms. Royalties usually are paid in finished goods.

A new form of cooperation has taken place in East-West banking relations. In November 1979, the National Bank of Hungary, together with six major Western European and Japanese financial institutions, established a Budpest-based Central European International Bank to operate as a joint stock company. Western shareholders have majority interest in this organization. The bank's activities include financing trade, making investments, and promoting joint ventures.

Some progress has been made in involving small- and medium-sized Western companies in East-West cooperation projects. Participation of such firms may be either as direct partners of COMECON countries' foreign trade organizations in supplying them with needed goods or as subcontractors of large Western firms.[9]

Poland has been the largest Eastern European user of industrial cooperation and countertrade arrangements. In 1980, 40 percent of total agreements involved coproduction, and about a fourth entailed purchases of foreign licenses in return for delivery of complete or partially finished products. Only 5 percent involved straight subcontracting.[10] Through these arrangements, Poland has established electronics and heavy equipment industries and speeded development of copper and coal resources. In general, loan repayment is made under repurchase agreements covering 25 to 30 percent of the purchase contract value. Potential for future industrial cooperation is seen in food processing, petrochemicals, and metallurgy.

Hungary may have been second in dollar value of economic cooperation transactions with Western partners among Eastern European COMECON countries in 1980. Under these arrangements, Hungary purchases Western technology, licenses, and equipment for modernizing chemical, machinery, and food-processing industries.

Czechoslovakia's involvement in economic cooperation agreements has been limited. Counterpurchase requirement was in the range of 40-50 percent of export value. Compensation under licensing agreements is made with resultant products. G.D.R. has not used either arrangement extensively in economic cooperation relations with the West in the past. In general, counterpurchase requirements for the Western partner were 40 percent of export value. Indications are G.D.R. will seek more reliance on economic cooperation with the West to increase imports in years to come.

[9]So far, Poland has been most active, entering cooperation agreements with small- and medium-sized Western companies.

[10]*The Journal of Commerce*, (New York, June 19, 1980), p. 9.

Czechoslovakia

Ministries and Service Organizations

1. Federal Ministry of Agriculture and Nutrition (Federalni Ministerstvo Zemedelstvi a Vyzivy); Texnov 65, Praha 1; telex: 121041

Prepares commodity balances and trade volume.

2. Federal Ministry of Foreign Trade (Federalni Ministerstvo Zahranicniho Obchodu); Politickych veznu 20, 121-49 Praha 1; Telex: 121489

Formulates annual foreign trade plans. Exercises control over all organizations engaged in foreign trade.

3. Commercial Bank of Czechoslovakia Ltd. (Ceskoslovenska Obchodni Banka a.s.); Na prikope 14; 115-20 Praha 1; Telex: 122201

Provides banking services for institutions and enterprises engaged in foreign trade.

4. Chamber of Commerce (Ceskoslovenska Obchodni Komora); Argentinska 38; 170-05 Praha 7; Telephone: 3808; Cable: Obkomora Praha; Telex: 121862

Provides market information and trading contacts for foreign business firms. A Czechoslovak-U.S. Economic Council was created under the aegis of the Czechoslovakian and U.S. Chambers of Commerce.

5. Foreign Trade Research Institute (Vyzkumny Ustav Pro Zahranicni Obchod); Kodanska 46, 100-10 Praha 10; Telephone: 715

Prepares statistics and forecasts on trade trends.

6. UNIFRUX; V. jame 3, 11345 Praha 1; Telex: 121944

Serves as commercial representative for foreign firms wishing to sell food, farm products, and machinery in Czechoslovakia.

7. RAPID; Ul 28 rijina 13, 112-79 Praha 1; Telex: 121142

Performs advertising, business promotion, and market research for foreign firms in Czechoslovakia.

Foreign Trade Organizations

1. KOOSPOL; Leninova 178, 16067 Praha 6; Telex: 121121

Fresh and processed foodstuffs, agricultural raw materials, feeds, and alcoholic beverages.

2. TRANSAKTA: Letenska 11, 118-19 Praha 1, P.O.B. 72; Telex: 121563

Barter deals and related foreign trade transactions.

3. INTERCOOP: Dr. VI. Clementisa 10, 829-75 Bratislava-Ostredky; Telex: 93365

Cooperative handicrafts and fresh and processed food specialties.

Publications

1. *Facts on Czechoslovak Foreign Trade*, annual Czechoslovak trade statistics, and related information.

2. *Czechoslovak Economic Digest*, monthly journal.

3. *Czechoslovak Foreign Trade*, quarterly journal.

4. *Commercial and Economic News*, bimonthly.

5. *For You From Czechoslovakia*, quarterly journal of light industry and food products.

6. *Trade-Industry-Economic Review*, (Revue Ubchod Prumysldarstvi), monthly journal.

7. *Statistical Yearbook of Czechoslovakia* (Statisticka Rocenka Ceshoslovanski Socialisticke Republiky), annual

Public Holidays

January 1 (New Year's), Easter Monday, May 1 (Labor Day), May 9 (National Day), and December 24-26 (Christmas Eve, Christmas, and St. Stephen's Day).

German Democratic Republic

Ministries and Service Organizations

1. Ministry of Foreign Trade of the German Democratic Republic (Ministerium für Aussenhandel der Deutschen Demokratischen Republik); Unter den Linden 44-60, G.D.R.-108 Berlin; Telephone: 2270; Cable: Windrose; Telex: 11369

Formulates annual and long-term foreign trade plans. Exercises control over all organizations engaged in foreign trade.

2. Ministry for Agriculture, Forestry, and Foodstuffs, (Ministerium für Landwirtschaft, Erfassung und Forstwirtschaft); Keopenicker Allee 39/57, G.D.R.-1157 Berlin

Prepares commodity balances and trade volume.

3. Chamber of Foreign Trade of the German Democratic Republic (Kammer für Aussenhandel der Deutschen Demokratischen Republik); Schadowstrasse 1, G.D.R.-108 Berlin; Telephone: 2202441, 2202926; Cable: Interkammer; Telex: 114840

Helps in arranging contacts with agencies.

4. G.D.R. Foreign Trade Bank (Deutsche Aussenhandelsbank AG); Unter den Linden 24-30, G.D.R.-108 Berlin; Telephone: 2200321; Cable: Dabank; Telex: 112111, 112004

Handles banking operations in import, export, and transit sectors.

Foreign Trade Organizations

1. Nahrung Export-Import (Volkseigener Aussenhandelsbetrieb der Landwirtschaft und Nahrungsgüterwirtschaft der D.D.R.); Schicklerstrasse 5-7, Postfach 1503, G.D.R.-102 Berlin; Telephone: 21480; Cable: Nahrung Berlin; Telex: 114893

Imports: Agricultural seed, oilseeds, grains, animal and plant protein, dairy products, meat and meat products, and cattle for breeding.

Exports: Agricultural, vegetable, and flower seed; horticultural products; seed and plants for forestry; oilseeds; grains; sugar, starch, and starch products; dairy products; cattle for slaughter, meat, and meat products; animal fats and intestines; cattle for breeding; small animals for medical testing purposes; live game; fresh-water fish; exotic fish and birds; cages; and aquarium supplies.

2. Transportmaschinen Export-Import (Volkseigener Aussenhandelsbetrieb der D.D.R.); Johannes-Dieckmann Strasse 11-13, G.D.R.-108 Berlin; Telephone: 2240; Cable: TRANSMASCH; Telex: 114494

Imports: Agricultural machinery; tractors; agricultural plants; machines for food, spirits, and tobacco industry; passenger cars; buses; two-wheeled vehicles; workshop equipment, vehicle spare parts; electric components and accessories; motorcycles.

Exports: Machinery and equipment for potato, grain, and cereal production; transport of liquid manure; grinding and mixing fodder; grain cleaning and storage; cattle breeding, milking, and milk processing.

3. Iberma GmbH (Gesellschaft für Internationale Wirtschafts und Marktberatung); Thulestrasse 44, G.D.R.-110 Berlin; Telephone: 48080; Telex: 113224 Ibermdd

Provides consultation for G.D.R. foreign trade enterprises. Gives marketing, selling, and purchasing advice.

4. Agrima Gmbh; Albrechtstrasse 11, 104 Berlin; Telephone: 4229471; Telex: 0113138.

Provides import and export representation, and establishes international business contacts for companies marketing agricultural products, fertilizer, and agricultural machinery and equipment.

5. Fruchtimex (Aussenhandelsgesellschaft GmbH); Schicklerstrasse 5-7, G.D.R.-1025 Berlin; Telephone: 21480; Telex: 4687.

Imports: Fresh fruit and vegetables, citrus fruits and drinks, fruit pulp, and tomato paste.

6. Zentral-Kommerz GmbH (Gesellschaft für internationalen Handel); Schonholzer Strasse 10-11, G.D.R.-110 Berlin; Telephone; 48220; Cable: Zentaka; Telex: 113291

Imports and exports agricultural products, foodstuffs, alcoholic beverages, machines, and textiles. Involved in countertrade arrangements.

Publications

1. *D.D.R. Aussenwirtschaft*, journal, weekly

2. *Berichte zur Konjunktur*, brochure, semi annual

3. *Information zu Fragen der Währungen, des Kredites, der Zinsen, und des Zahlungsverkehrs im nichtsozialistischenen Wirtschaftsgebiet*, pamplet, fortnightly.

4. *Die Wirtschaft*, journal, fortnightly

5. *Der Handel*, bimonthly

6. *GDR Export*, by-product groups, quarterly

7. *GDR Foreign Trade*, annual

8. *Statistical Yearbook of the German Democratic Republic* (Statistisches Jahrbuch der Deutschen Demokratischen Republik)

Public Holidays

January 1 (New Year's), Good Friday, May 1 (international working class holiday), Whit Monday, October 7 (founding of G.D.R.), and December 25-26 (Christmas)

Hungary

Ministries and Service Organizations

1. Ministry of Agriculture and Food (Mezögazdásági és Élelmezésügyi Minisztérium); V. Kossuth Lajos tér 11, H-1860 Budapest; Phone: 113000

Prepares commodity balances and trade volume.

2. Ministry of Foreign Trade (Külkereskelmi Minisztérium); V. Honvéd u. 13/15, H-1880 Budapest; Phone: 119050

Formulates annual and long-term foreign trade plans. Controls all organizations engaged in foreign trade.

3. Hungarian Foreign Trade Bank Ltd. (Magyar Külkereskedelmi Bank Rt.); Szent István tér 11, H-1821, Budapest V.; Telephone: 414390; Cable: EXTERBANK Budapest; Telex: 225557, 225558, 226447

Engages in various export and import transactions common to international banking practice.

4. Hungarian Chamber of Commerce (Magyar Kereskedelmi Kamara); Kossuth Lajos tér 6-8, Budapest V.; Letters: P.O.B. 106, H-1389 Budapest; Telephone: 314115, 125380; Telex: 224745

Assists in establishing trade relations and organizes visits of foreign trade and industrial missions to Hungary.

5. Institute for Economic and Market Research (Konjunktura-és Piackutató Intézet; Dorottya U. 6, Budapest V.; Letters: P.O.B. 133, H-1389 Budapest; Telephone: 184055; Cable: KONJUNKTURA Budapest; Telex: 22-5646 kpi bp

Offers information and prepares studies on Hungarian market situation, trends, and selling opportunites; economic and technical cooperation with Hungarian firms; Hungarian marketing methods; government regulations in foreign trade; and concepts of a general market strategy.

6. Intercooperation Co. Ltd. for Trade Promotion (Intercooperation Kereskedelmefejlesztési Rt.); Attila ut 14; Budapest 1.; Letters: P.O.B. 53, H-1253 Budapest; Phone 152220; Cable: INTERCOOP,. Telex: 224242

Establishes joint ventures with foreign companies to promote production and trade. Acts as consultant in technical, commercial, financial, and legal matters to cooperating Hungarian and foreign enterprises.

Foreign Trade Organizations

1. AGRARIA-Bábolna - Foreign Trade Office of the Agricultural Combinate, Bábolna (A Bábolnai Állami Gazdaság Külkereskedelmi Irodája); H-2943, Babolna; Telephone: Babolna 226555; Cable: AGRARIA Babolna; Telex: Babolna 27211

Export-Import: Hatching eggs and baby chicks; breeding, jumping, and riding horses; complete poultry farms with breeding stock; complete pig farms with breeding stock; breeding sheep.

2. AGRIMPEX - Hungarian Trading Company for Agricultural Products (Mezögazdasági Külkereskedelmi Vállalat); Münnich Ferenc utca 22, Budapest V.; Letters: P.O.B. 278, H-1392, Budapest; Telephone 113800, 112804; Cable: AGRIMPEX Budapest,. Telex: 225751

Export-Import: Grains for milling and feeding, agricultural seeds, vegetable fats and oils, foodstuffs, and vegetable and animal protein products.

3. AGROTROSZT - Trust for Agricultural Supply (Mezögazdasági Ellátó Tröszt); Bajcsy-Zsilinszky ut 57, Budapest VI.; Letters: P.O.B. 66, H-1388 Budapest; Telephone 317188 Cable: AGROTROSZT Budapest; Telex: 225651

Imports: Machines for agriculture plant protection, gardening, stock breeding, forestry, and primary woodworking.

4. HUNGAROCOOP - Hungarian Cooperative Foreign Trading Company (Magyar Szövetkezeti Külkereskedelmi Vállalat); Oktober 6. utca 12, 1051 Budapest V.; Letters: P.O.B. 334, H-1370 Budapest; Telephone: 214870, 427181, 222254, 328165 317764; Cable: HUNGAROCOOP Budapest; Telex: 224858, 224859

Imports: Agricultural implements and tools for the private consumer and smaller agricultural associations.

Exports: Folk art and various articles made by Hungarian cooperatives.

Implements agreements between Hungarian cooperatives and foreign firms or cooperatives establishing new cooperative ventures; expands capacity of existing plants; concludes long-term agreements for cooperation; transacts barter, reciprocity, etc.; deals in products manufactured by the cooperative industry.

5. MONIMPEX - Hungarian Foreign Trading Company (Külkereskedelmi Vállalat); Tüköry utca 4; Budapest V.; Letters: P.O.B. 268, H-1392 Budapest; Telephone: 128415; Cables: MONIMPEX Budapest; Telex: 225371

Imports: Beverages, spirits, beers, tobacco products, tinned fish, and raisins.

Exports: Wines, spirits, spices, and assorted foods and beverages.

6. TERIMPEX - Export and Import of Cattle and Livestock (Állát- es Termékforgalmi Külkereskedelmi Vállalat); Karolyi utca 9; Budapest V.; Letters: P.O.B. 251, H-1825 Budapest; Telephone: 175011; Cables: TERIMPEX Budapest; Telex: 224551

Export-Import: Livestock, livestock products, meat, poultry products, dairy products, fish, canned foods, and feathers.

Publications

1. *Hungarian Foreign Trade*, quarterly in English, Russian

2. *New Hungarian Exporter*, monthly in English, with special editions in other languages

3. *Marketing in Hungary*, quarterly in English and German

4. *Hungaropress Economic Information*, fortnightly bulletin in English, French, Russian, German, Spanish, and Italian

5. *Directory of Hungarian Foreign Trade Companies*, published every year in Hungarian, English, French, German, Russian, and Spanish.

6. Hungarian imports (*Magyar Import*), published monthly and carries advertisements for foreign clients in Hungarian.

7. Foreign Economic Relations (*Külgazdasag*), published monthly and carries advertisements for foreign clients in Hungarian

8. Publicity, Advertising (*Propaganda Reklám*), published bimonthly and carries advertisements for foreign clients in Hungarian

9. World Economy (*Világgazdaság*), daily, jointly published by the Hungarian Chamber of Commerce and the Institute for Economic and Market Research and carries advertisements for foreign clients in Hungarian

10. *Statistical Yearbook*, in English and Russian

11. *Statistical Pocket Book*, published every year in English, Russian, and German

12. *Hungary Today*, published every 3 or 4 years in English, French, German, Russian, and Spanish

13. Monthly Statistical Publication (*Statisztikai Havi Közlemények*)

14. Data on Domestic Trade and Tourism (*Belkereskedelmi és Idegenforgalmi Adatok*), published quarterly

15. Yearbook of Domestic Trade (*Belkereskedelmi Évkönyv*) in Hungarian

16. Yearbook of Transport and Telecommunication (*Közlekedési és Hirközlési Évkönyv*) in Hungarian

17. Statistical Review (*Statisztikai Szemle*), monthly in Hungarian

18. *Economic Bulletin* of the Hungarian National Bank, published half-yearly in English and Russian

19. *The Hungarian Economy*, published quarterly in English

20. *The New Hungarian Quarterly*, English language review on Hungarian history, economy, and culture

21. *Budapester Rundschau*, published weekly in German

22. *Nouvelles Études Hongroises*, published annually in French

23. *MTI Budapress*, Weekly Bulletin, published in English, French, German, and Russian

24. Observer (*Figyelö*), economic weekly in Hungarian

25. Economic Review (*Közgazdasági Szemle*), published monthly by the Committee on Economics of the Hungarian Academy of Sciences in Hungarian

26. Economy (*Gazdaság*), published quarterly by the Hungarian Economic Association in Hungarian

27. Financial Review (*Pénzügyi Szemle*), published monthly by the Hungarian Ministry of Finance in Hungarian

Public Holidays

January 1 (New Year), April 4 (Liberation Day), Easter Monday, May 1 (Labour Day), August 20 (Constitution Day), November 7 (Anniversary of the Great Socialist October Revolution), December 25 and 26 (Christmas, Boxing Day)

Poland

Ministries and Service Organizations

1. Ministry of Agriculture (Ministerstwo Rolnictwa); ul. Wspólna 30, 00-930 Warszawa; Telephone; 21011

Prepares commodity balances and trade volume

2. Ministry of Foreign Trade and Maritime Economy (Ministerstwo Handlu Zagranicznego i Gospodarki Morskiej): ul. Wiejska 10, 00-489 Warszawa; Telephone: 21-013

Prepares annual and long-term foreign trade plans. Formulates foreign trade policy and coordinates work of all institutions engaged in foreign trade.

3. Ministry of Food Industry and Purchase (Ministerstwo Przemyslu Spożywczego i Skupu); ul. Swietokrzyska 20, Warszawa; Telephone: 276189

Supervises purchase of agricultural commodities from farms, feed milling and distribution, oilseed crushing, flour milling, and meat and poultry processing.

4. The Foreign Trade Bank (The Bank Handlowy w Warszawie, S.A.); ul. Traugutta 7/9, P.O.B. 129, 00-950 Warszawa; Telephone: 262911 to 15: Telex: 814811 bhw pl

Supervises, handles, and finances banking operations of Polish foreign trade organizations.

5. Polish Chamber of Foreign Trade (Polska Izba Handlu Zagranicznego); ul. Trebacka 4, P.O.B. 361, 00-950 Warszawa; Telephone: 260221; Telex: 814361 pihz pl; Cable: Polchamber Warszawa

Provides assistance to foreign firms such as arranging contacts with Polish organizations and provides information on trade practices in Poland. With the U.S. Chamber of Commerce, the Polish Chamber of Foreign Trade cosponsors the Polish-U.S. Economic Council.

Foreign Trade Organizations

1. ROLIMPEX; Al. Jerozolimskie 44, P.O.B. 364, 00-950 Warsawa; Telephone: 262011 or 262411; Telex: 814341 rolx pl; Cable: ROLIMPEX WARSZAWA

Import-Export: Grains, seeds, spices, sugar, fats, fodder, brewery raw materials, medicinal plants, cooking herbs, and reproduction of seeds.

2. ANIMEX; ul. Pulawska 14, 02-512 Warsawa; Phone: 494851 Telex: 814491 ax pl.; Cable: ANIMEX WARSZAWA

Import-Export: Meat and meat products, poultry, feathers and down, live animals, dairy products, and frozen and canned game.

3. SKORIMPEX; ul. 22 Lipca 74, P.O.B. 133, 90-950 Lodz; Phone: 25050; Telex: 886255; Cable: SKORIMPEX LODZ

Import-Export: Skins and hides; leather and fur garments; leather and textile shoes; calfskin, pigskin, horsehides, other leather, and fur articles; tannings, extracts, and semifinished products for the leather industry; and wooden sole footwear.

4. AGROMET—MOTOIMPORT; ul. Przemyslowa 26, P.O.B. 990; 00-950 Warsawa; Phone: 285071; Telex: 813511 or 813665 moto pl.; Cable: MOTORIM WARSZAWA

Import-Export: Tractors and other agricultural machinery, equipment, tools, and spare parts.

5. CIECH: ul. Jasna 12, P.O.B. 271, 00-950 Warsawa; Phone: 269001 to 09 or 269031 to 35; Telex: 814561 cie pl; Cable: CIECH WARSZAWA

Import-Export: Pharmaceuticals, dyestuffs, pesticides, inorganic chemicals, fertilizers, plastics, glues, sulphur, salt, rubber and rubber products, oil, oil and coke derivatives, paints, licenses, and technology.

6. DAL; ul. Swietokrzyska 12, 00-044 Warszawa; Phone: 200311; Telex: 814831 dal pl; Cable: DALOS WARSZAWA

Responsibility: Arranges for compensation deals, industrial cooperation, participation in mixed companies, re-export and export-import brokerage through commercial agencies in foreign countries.

7. POLIMEX-CEKOP; ul. Czackiego 7/9, P.O.B 815, 00-950 Warszawa; Phone: 268001; Telex: 814271 poli pl; Cable: POLIMEX-CEKOP WARSZAWA

Import-Export: Machines, equipment, and complete plants for food processing, building materials, glass, chemicals, wood, and paper.

8. EXIMPOL, Society of International Trade Representatives and Agents; ul. Stawki 2, P.O.B. 810, 00-950 Warszawa; Phone: 399111; Telex: 814640 exim pl; Cable: EXIMPOL WARSZAWA '

Publications

1. *Polish-Foreign Trade*, monthly, devoted to trade policy and basic information on foreign trade.

2. *Foreign Trade*, annual, contains articles by leading government officials noteworthy for their objectivity.

3. *Polish Fair Magazine*, quarterly, provides information on International Trade Fairs at Poznan.

4. *Polish Economic Survey*, Bimonthly, current information on the Polish economy and foreign trade.

5. *Polish Economic Review*, biweekly, contains economic information intended for the foreign press; government; and industrial, commercial, and educational institutions.

6. *Polish Maritime News*, monthly, supplies information about all aspects of shipping, ports, shipbuilding, and related official data.

7. *Food From Poland*, quarterly, provides information and advertisements for the Polish food, agriculture, fishing, and forest industries.

8. *Polish Perspectives*, monthly, contains economic articles and briefs as well as political and social commentaries. Good summaries of developments in various economic branches.

9. *Information for Businessmen Trading with Poland*, bi-annual, provides a guide to Polish foreign trade system functions of various organizations and regulations affecting transactions with foreign partners.

10. *Contemporary Poland*, bimonthly, carries translations of key official speeches, economic plan reports, and, occasionally, analyses of particular sectors.

11. *Concise Statistical Yearbook of Poland*, (Glowny Urzad Statystyczny), annual, in English.

12. *Statistical Yearbook of Foreign Trade* (Rocznik Statystyczny Handlu Zagranicznego), annual, in Polish.

Public Holidays

January 1 (New Year), Easter Monday, May 1 (Labor Day), May 9 (Victory Day), Corpus Christi, July 22 (National Day), November 1 (All Saints Day), and December 25-26 (Christmas).

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Appendix table 1—Wheat area, yield, and production in selected Eastern European countries

Country	1960	1961-65	1966-70	1971-75	1976-80	1978	1979	1980	1981	1982	1983[4]
Czechoslovakia											
Area[1]	652	735	991	1,199	1,229	1,274	1,111	1,197	1,083	1,073	1,150
Yield[2]	2.31	2.42	2.90	3.64	4.03	4.40	3.36	4.50	3.99	4.30	4.61
Production[3]	1,503	1,779	2,869	4,360	4,949	5,600	3,736	5,386	4,325	4,613	5,300
G.D.R.											
Area	418	430	549	687	720	686	712	707	675	591	740
Yield	3.48	3.15	3.65	4.03	4.16	4.59	4.51	4.38	4.36	4.82	4.19
Production	1,456	1,357	2,006	2,767	2,998	3,147	3,116	3,098	2,942	2,850	3,097
Hungary											
Area	1,051	1,083	1,231	1,292	1,274	1,324	1,135	1,276	1,151	1,310	1,363
Yield	1.68	1.82	2.44	3.32	4.06	4.28	3.25	4.75	4.00	4.40	4.33
Production	1,768	1,967	3,006	4,295	5,179	5,665	3,703	6,068	4,614	5,770	5,900
Poland											
Area	1,361	1,516	1,835	1,987	1,735	1,852	1,549	1,609	1,418	1,456	1,430
Yield	1.69	1.97	2.32	2.82	2.93	3.26	2.70	2.59	2.96	3.07	3.18
Production	2,303	2,988	4,260	5,605	5,089	6,029	4,187	4,175	4,203	4,476	4,550
Eastern Europe											
Area	9,724	10,075	10,486	10,456	9,777	10,067	9,089	9,512	9,021	9,372	9,655
Yield	1.71	1.82	2.36	2.97	3.39	3.53	3.00	3.58	3.38	3.70	3.38
Production	16,503	19,334	24,230	31,029	33,144	35,521	27,275	34,082	30,522	34,703	32,647

[1] Area = 1,000 hectares.
[2] Yield = metric tons per hectare.
[3] Production = 1,000 metric tons.
[4] Estimated.

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe*, (various issues).

Appendix table 2—Corn area, yield, and production in selected Eastern European countries

Country	1960	1961-65	1966-70	1971-75	1976-80	1978	1979	1980	1981	1982	1983[5]
Czechoslovakia											
Area[1]	195	180	139	157	201	202	206	192	169	183	185
Yield[2]	2.93	2.63	3.40	4.08	3.60	3.06	4.60	3.88	4.18	5.13	3.24
Production[3]	572	474	472	640	724	619	949	745	706	939	600
G.D.R.											
Area	2	1	2	4	1	1	1	[4]—	—	1	1
Yield	2.50	3.00	2.00	3.00	3.00	2.00	6.00	—	—	3.00	3.00
Production	5	3	4	11	3	2	6	—	—	3	3
Hungary											
Area	1,401	1,281	1,223	1,410	1,297	1,283	1,352	1,229	1,163	1,134	1,000
Yield	2.50	2.82	3.26	4.19	4.89	5.19	5.47	5.43	6.02	6.79	5.20
Production	3,504	3,616	3,992	5,906	6,348	6,655	7,400	6,673	6,998	7,700	5,200
Poland											
Area	18	8	5	7	41	33	47	18	16	18	20
Yield	2.69	2.50	2.60	4.06	3.97	3.64	3.85	3.22	4.06	3.83	4.00
Production	48	20	13	27	164	120	181	58	65	69	80
Eastern Europe											
Area	8,549	6,739	7,781	7,797	7,746	7,429	7,833	7,508	7,661	7,402	7,421
Yield	2.04	2.57	2.77	3.32	3.90	3.69	4,37	4.00	3.88	4.88	4.24
Production	17,453	17,344	21,532	25,887	30,178	27,425	34,264	30,064	29,741	36,113	31,433

[1] Area = 1,000 hectares.
[2] Yield = metric tons per hectare.
[3] Production = 1,000 metric tons.
[4] — = Not reported.
[5] Estimated.

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe*, (various issues).

Appendix table 3—Barley area, yield, and production in selected Eastern European countries

Country	1960	1961-65	1966-70	1971-75	1976-80	1978	1979	1980	1981	1982	1983[4]
Czechoslovakia											
Area[1]	707	682	739	885	917	919	1,042	921	987	967	920
Yield[2]	2.47	2.28	2.82	3.38	3.69	3.96	3.46	3.88	3.44	3.77	3.70
Production[3]	1,745	1,556	2,087	2,991	3,385	3,638	3,604	3,575	3,392	3,649	3,400
G.D.R.											
Area	389	438	590	735	981	1,035	945	969	964	981	930
Yield	3.26	2.95	3.24	4.04	3.79	3.99	3.52	4.11	3.61	4.18	3.76
Production	1,269	1,291	1,913	2,966	3,715	4,134	3,323	3,979	3,476	4,100	3,500
Hungary											
Area	560	518	398	281	237	225	263	246	286	262	290
Yield	1.94	1.87	2.12	2.88	3.24	3.38	2.69	3.76	3.16	3.38	3.45
Production	986	970	843	810	769	760	707	926	903	885	1,000
Poland											
Area	717	704	727	1,113	1,288	1,203	1,470	1,322	1,294	1,240	1,280
Yield	1.83	1.94	2.30	2.86	2.76	3.02	2.54	2.58	2.74	2.94	2.85
Production	1,310	1,368	1,673	3,181	3,559	3,633	3,730	3,420	3,540	3,650	3,649
Eastern Europe											
Area	3,254	3,292	3,473	4,181	4,869	4,849	5,254	5,018	5,150	5,044	4,860
Yield	2.11	2.07	2.47	3.09	3.21	3.41	2.96	3.30	3.11	3.47	3.05
Production	6,873	6,859	8,568	12,902	15,607	16,528	15,576	16,566	16,018	17,486	14,839

[1] Area = 1,000 hectares.
[2] Yield = metric tons per hectare.
[3] Production = 1,000 metric tons.
[4] Estimated.

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe*, (various issues).

Appendix table 4—Oats area, yield, and production in selected Eastern European countries

Country	1960	1961-65	1966-70	1971-75	1976-80	1978	1979	1980	1981	1982	1983[4]
Czechoslovakia											
Area[1]	504	416	402	278	162	151	149	139	147	172	140
Yield[2]	2.02	1.91	2.15	2.62	2.61	3.02	2.71	3.04	2.93	2.84	2.86
Production[3]	1,020	792	866	729	423	456	404	422	431	488	400
G.D.R.											
Area	359	319	254	236	157	153	136	155	172	218	175
Yield	2.81	2.67	3.00	3.56	3.34	3.89	2.91	3.75	3.48	3.90	4.00
Production	1,007	850	762	841	525	595	532	582	598	850	700
Hungary											
Area	141	93	52	42	35	27	44	35	55	50	40
Yield	1.45	1.03	1.40	1.84	2.37	2.85	1.98	3.03	2.91	2.50	3.25
Production	204	96	73	77	84	77	87	106	160	125	130
Poland											
Area	1,641	1,548	1,409	1,287	1,067	1,030	1,094	997	1,156	1,085	1,100
Yield	1.69	1.71	2.05	2.45	2.28	2.42	2.00	2.25	2.36	2.41	2.36
Production	2,774	2,641	2,893	3,158	2,434	2,492	2,186	2,245	2,730	2,610	2,600
Eastern Europe											
Area	3,449	3,008	2,658	2,285	1,738	1,670	1,745	1,612	1,852	1,800	1,747
Yield	1.71	1.67	1.96	2.33	2.24	2.42	2.07	2.33	2.37	2.47	2.43
Production	5,891	5,031	5,200	5,317	3,890	4,037	3,618	3,750	4,383	4,440	4,248

[1] Area = 1,000 hectares.
[2] Yield = metric tons per hectare.
[3] Production = 1,000 metric tons.
[4] Estimated.

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe,* (various issues).

Appendix table 5—Rye area, yield, and production in selected Eastern European countries

Country	1960	1961-65	1966-70	1971-75	1976-80	1978	1979	1980	1981	1982	1983[4]
Czechoslovakia											
Area[1]	431	429	310	220	186	187	166	179	171	176	175
Yield[2]	2.08	2.09	2.19	2.86	3.11	3.37	2.93	3.18	3.18	3.31	3.43
Production[3]	895	897	678	629	578	630	486	570	544	582	600
G.D.R.											
Area	946	820	724	638	645	652	678	678	656	700	687
Yield	2.25	2.12	2.37	2.43	2.71	2.91	2.70	2.83	2.74	3.00	2.62
Production	2,126	1,741	1,718	1,774	1,748	1,895	1,830	1,917	1,797	2,100	1,800
Hungary											
Area	301	253	189	113	81	78	69	73	74	74	73
Yield	1.18	1.03	1.16	1.51	1.65	1.74	1.33	1.93	1.57	1.62	1.78
Production	354	260	219	170	133	137	92	141	116	120	130
Poland											
Area	5,122	4,563	4,087	3,320	2,997	3,030	2,868	3,039	3,002	3,273	3,240
Yield	1.54	1.64	1.83	2.31	2.16	2.45	1.81	2.16	2.24	2.38	2.45
Production	7,878	7,466	7,469	7,679	6,476	7,434	5,201	6,566	6,731	7,792	7,938
Eastern Europe											
Area	7,199	6,384	5,535	4,459	4,029	4,063	3,896	4,084	4,020	4,339	4,294
Yield	1.62	1.67	1.87	2.35	2.26	2.51	1.99	2.29	2.32	2.48	2.47
Production	11,677	10,692	10,337	10,456	9,090	10,246	7,765	9,349	9,342	10,755	10,620

[1] Area = 1,000 hectares.
[2] Yield = metric tons per hectare.
[3] Production = 1,000 metric tons.
[4] Estimated.

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe,* (various issues).

Appendix table 6—Sunflower seed and rapeseed area, yield, and production in selected East European countries

Country	1960	1961-65	1966-70	1971-75	1976-80	1978	1979	1980	1981	1982	1983[4]
Sunflower seed											
Czechoslovakia											
Area[1]				4	13	11	21	20	19	22	25
Yield[2]				1.25	1.31	1.36	1.23	1.45	1.74	1.59	1.60
Production[3]				5	18	15	26	29	33	35	40
Hungary											
Area	69	115	86	114	185	151	228	273	302	297	290
Yield	0.97	0.95	1.09	1.23	1.61	1.47	1.83	1.67	2.07	1.97	2.10
Production	68	110	94	141	298	223	417	456	624	585	610
East Europe											
Area	840	1,055	1,125	882	1,160	1,149	1,255	1,229	1,286	1,197	1,215
Yield	1.10	1.10	1.40	1.52	1.69	1.71	1.82	1.61	1.75	1.80	1.79
Production	924	1,161	1,576	1,347	1,966	1,962	2,282	1,982	2,245	2,160	2,173
Rapeseed											
Czechoslovakia											
Area	39	45	44	54	72	79	55	91	95	80	120
Yield	1.00	1.30	1.60	2.03	2.09	2.10	1.45	2.35	2.09	2.25	2.00
Production	39	59	70	110	151	166	80	214	199	180	220
G.D.R.											
Area	118	113	111	118	123	124	113	125	125	125	120
Yield	1.50	1.50	1.90	2.26	2.36	2.56	2.04	2.46	2.27	2.40	2.00
Production	117	170	211	267	291	318	200	308	284	300	240
Hungary											
Area	3	6	14	44	53	70	33	51	56	50	50
Yield	1.00	1.10	1.00	1.36	1.51	1.52	1.24	1.92	1.34	1.40	1.40
Production	3	7	14	60	80	107	41	98	75	70	70
Poland											
Area	108	233	279	304	327	337	180	320	277	260	245
Yield	1.36	1.44	1.84	1.83	1.94	2.05	1.30	1.77	1.75	1.65	2.40
Production	147	323	516	557	636	691	234	567	485	430	588
Eastern Europe											
Area	292	397	448	526	612	653	430	633	588	580	589
Yield	1.40	1.41	1.84	1.90	2.01	2.09	1.53	2.01	1.89	1.89	1.78
Production	410	563	825	1,001	1,229	1,366	659	1,273	1,111	1,094	1,051

[1] Area = 1,000 hectares.
[2] Yield = metric tons per hectare.
[3] Production = 1,000 metric tons.
[4] Estimated.

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe* (Various issue).

Appendix table 7—Soybeans and oilseeds area, yield, and production in selected East European countries

Country	1960	1961-65	1966-70	1971-75	1976-80	1978	1979	1980	1981	1982	1983[4]
Soybeans											
Czechoslovakia											
Area[1]				2	3	3	3	3	3	3	3
Yield[2]				1.50	1.29	1.00	1.66	2.00	2.00	1.67	1.67
Production				3	4	3	5	6	6	5	5
Hungary											
Area				8	25	19	20	25	24	29	31
Yield				1.37	1.39	1.47	1.75	1.52	1.75	1.69	1.61
Production				11	35	28	35	38	42	49	50
Eastern Europe											
Area				192	379	357	452	498	472	489	490
Yield				1.39	1.33	1.24	1.43	1.28	1.08	1.49	1.48
Production				168	505	444	646	635	512	731	724
Oilseeds											
Czechoslovakia											
Area	39	45	44	60	89	93	79	114	117	125	148
Yield	1.00	1.68	1.81	1.90	1.95	2.00	1.38	2.18	2.03	1.76	1.92
Production	39	76	80	118	174	186	109	249	238	220	285
G.D.R.											
Area	136	121	118	125	123	124	113	125	125	136	136
Yield	1.43	1.84	1.91	2.20	2.36	2.56	1.77	2.46	2.27	2.36	2.35
Production	194	223	225	275	291	318	200	308	284	320	319
Hungary											
Area	72	121	100	166	264	240	281	358	391	385	380
Yield	0.98	1.00	1.08	1.27	1.57	1.49	1.76	1.68	1.92	1.85	1.95
Production	71	122	108	212	414	358	495	602	752	714	740
Poland											
Area	108	223	279	304	327	337	180	320	277	300	295
Yield	1.36	1.44	1.84	1.83	1.94	2.05	1.30	1.77	1.75	1.49	2.06
Production	147	323	516	557	636	691	234	566	485	447	608

[1] Area = 1,000 hectares.
[2] Yield = metric tons per hectare.
[3] Production = 1,000 metric tons.
[4] Estimated.

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe* (various issues); United Nations, Food and Agriculture Organization, *Monthly Bulletin of Statistics*, (various issues).

Appendix table 8—Estimated unrestricted reduced-form equation for feed grain import projections[1]

Country	Endogenous variable	Intercept	Exogenous Variables[1]						R^2
			PRF_t	POP_{t-1}	$DFGA_t$	PPI_{t-1}	$DFGA_{t-1}$	NTB_{t-1}	
Czechoslovakia	MIC	−136.27	52.33	−1.016	−0.093	19.256	−0.019	−0.006	0.49
			(0.10)	(−0.07)	(−0.76)	(0.70)	(−0.17)	(−0.00)	
	MOF	−653.678	239.87	−2.63	−0.026	−11.56	0.048	−0.518	0.63
			(0.88)	(0.41)	(−0.40)	(−0.78)	(−0.82)	(−0.60)	
G.D.R.	MIC	4,359.30	−1,753.02	−142.24	−0.108	38.004	−0.101	−0.050	0.85
			(−2.24)	(−0.10)	(−1.45)	(2.82)	(−1.08)	(0.02)	
	MOF	−1,341.88	3,074.08	173.60	−0.316	3.340	−0.296	−13.494	0.62
			(1.18)	(0.04)	(−1.27)	(0.07)	(−0.95)	(1.82)	
Poland	MIC	−8,769.27	232.191	369.04	−0.0033	−10.890	−10.007	0.415	0.86
			(0.29)	(0.74)	(−0.06)	(−0.31)	(−1.45)	(−2.23)	
	MOF	13,902.26	−901.89	−443.99	−0.092	102.322	−0.79	0.539	0.86
			(−1.12)	(10.90)	(−1.57)	(2.95)	(−1.50)	(2.91)	

[1] Values in parenthesis are t ratios.

DFGA = Annual quantity of domestic feed grains available (sum of corn, barley, oats, rye, and potatoes expressed in grain equivalent units less exports).
MIC = Annual imports of corn expressed in 1,000 metric tons.
MOF = Annual imports of other feed grains (includes barley, rye, oats) expressed in 1,000 metric tons.
NTB = Value of net trade balance with the industrialized West in millions of U.S. dollars.
POP = Annual population in millions.
PPI = Annual per-capita product index.
PRF = Price ratio of corn to barley.

Appendix table 9—Estimated equations used in soybean and other oilseed product import projections[1]

Czechoslovakia:												
(1) MSM =	1425.07	+	6.797LIP	+	294.666PRO	+	$0.087DOA_{t-1}$	+	$0.084NTB_{t-1}$		D.W. = 2.31
	(2.522)		(2.164)		(1.343)		(0.436)		(0.207)		
(2) MOM =	1601.26	+	10.509LIP	+	275.674PRO	−	$0.727DOA_{t-1}$	+	$1.295NTB_{t-1}$		D.W. = 1.36
	(1.127)		(1.296)		(0.500)		(−1.435)		(1.262)		
(3) LIP =	617.189	−	$4.049POP_{t-1}$	+	$1.855PPI_{t-1}$						D.W. = 0.99
	(2.347)		(−1.976) $_{t-1}$		(5.254)						
G.D.R.:											
(1) MSM =	3469.82	+	17.426LIP	+	291.765PRO	−	$5.834DOA_{t-1}$	−	$0.155NTB_{t-1}$		D.W. = 2.35
	(−3.939)		(4.725)		(0.562)		(−2.107)		(−0.136)		
(2) MOM =	−122-0.68	+	6.320LIP	+	53.320PRO	−	$0.226DOA_{t-1}$	+	$0.728NTB_{t-1}$		D.W. = 2.36
	(−2.697)		(3.334)		(0.200)		(−0.159)		(1.243)		
(3) LIP =	183.233	−	$0.240POP_{t-1}$	+	$1.067PPI_{t-1}$						D.W. = 2.41
	(1.625)		(−0.370)		(16.686)						
Hungary:											
(1) MSM =	1071.73	+	1.609LIP	−	149.928PRO	−	$1.276DOA_{t-1}$	+	$0.081NTB_{t-1}$		D.W. = 2.42
	(−2.841)		(2.874)		(−0.483)		(1.675)		(0.543)		
(2) MOM =	269.585	+	0.581LIP	−	322.028PRO	−	$1.276DOA_{t-1}$	+	$0.128NTB_{t-1}$		D.W. = 2.70
	(−1.504)		(1.183)		(2.184)		(1.433)		(1.808)		
(3) LIP =	−535.078	+	$10.360POP_{t-1}$	+	$2.199PPI_{t-1}$						D.W. = 2.25
	(0.120)		(0.222)		(0.626)						
Poland:											
(1) MSM =	−1178.56	+	2.692LIP	−	0.220PRO	−	$0.358DOA_{t-1}$	−	$0.115NTB_{t-1}$		D.W. = 1.61
	(−5.313)		(5.667)		(0.001)		(−1.171)		(−0.286)		
(2) MOM =	−1485.96	+	3.226LIP	+	471.143PRO	+	$0.716DOA_{t-1}$	+	$1.189NTB_{t-1}$		D.W. = 2.51
	(−4.137)		(4.194)		(1.348)		(−1.448)		(1.827)		
(3) LIP =	658.825	−	$1.641POP_{t-1}$	+	$4.299PPI_{t-1}$						D.W. = 1.66
	(1.551)		(−1.030)		(5.518)						

[1] Values in parenthesis are t values. The equations are estimated from the observation period 1960-77.

DOA = Annual domestic availability of protein meals.
LIP = Composite livestock inventory index composed of cattle, hogs, horses, and poultry weighted according to estimated relative protein meal consumption and expressed in 100,000 head.
MOM = Annual imports of competing meals and oilseeds expressed in 1,000 metric tons on a raw protein equivalent basis with soybean meal.
MSM = Annual soybean meal imports, including the meal equivalent of imported, uncrushed soybeans expressed in 1,000 metric tons.
NTB = Net trade balance with the Western industrialized countries in millions of U.S. dollars.
POP = Annual population in millions.
PPI = Per-capita product index.
PRO = Ratio of price of soybean meal to price of competing meals.

Appendix table 10—Total trade of selected Eastern European countries, 1960-81

	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981[1]
Czechoslovakia										
Exports	1,930	2,689	3,792	8,356	9,035	10,302	11,747	13,198	14,189	16,290
Imports	1,816	2,672	3,695	9,081	9,706	11,187	12,565	14,262	15,148	16,025
Balance	114	17	97	– 725	– 671	– 885	– 818	– 1,064	– 257	265
G.D.R.										
Exports	1,966	2,776	4,581	10,088	11,361	12,024	13,267	15,063	17,312	19,135
Imports	1,981	2,546	4,847	11,290	13,196	14,334	14,572	16,214	19,082	20,900
Balance	– 15	230	– 266	– 1,202	– 1,835	– 2,310	– 1,305	– 1,151	– 1,770	– 1,765
Hungary										
Exports	874	1,510	2,317	6,091	4,934	5,832	6,345	7,938	8,677	8,980
Imports	976	1,521	2,506	7,176	5,529	6,523	7,902	8,674	9,235	9,430
Balance	– 102	– 11	– 189	– 1,085	– 595	– 691	– 1,557	– 736	– 558	– 450
Poland										
Export	1,326	2,228	3,548	10,283	11,017	12,265	14,114	16,249	16,997	14,380
Imports	1,495	2,340	3,608	12,536	13,867	14,616	16,089	17,584	19,089	16,835
Balance	– 169	– 112	– 60	– 2,253	– 2,850	– 2,351	– 1,975	– 1,335	– 2,092	– 2,455
Eastern Europe										
Exports	7,951	12,572	19,772	48,922	52,745	59,035	66,565	77,281	88,846	94,045
Imports	8,375	12,622	21,321	58,530	61,386	69,680	77,463	88,534	99,434	101,630
Balance	– 424	– 50	– 1,549	– 9,608	– 8,641	– 10,645	– 11,898	– 11,253	– 10,588	– 7,585

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe,* various issues.

[1] Preliminary

Appendix table 11—Selected Eastern European countries' trade with developed market economy countries

	Czechoslovakia	G.D.R.	Hungary	Poland	Eastern Europe
		Million dollars and (percent of totals)			
Exports					
1965	468	635	336	647	2,546
	(17.4)	(20.7)	(22.3)	(29.0)	(21.6)
1970	783	1,003	627	1,024	4,318
	(20.6)	(21.9)	(27.0)	(28.9)	(23,9)
1975	1,563	2,263	1,368	3,278	10,819
	(20.0)	(22.4)	(32.7)	31.9)	(25.5)
1976	1,615	[1]—	1,495	3,564	—
	(18.5)	—	(30.1)	(32.3)	—
1977	1,836	2,746	1,637	3,877	12,920
	(18.4)	(22.6)	(28.3)	(31.6)	(24.3)
1978	1,986	2,615	1,928	4,418	14,450
	(18.6)	(19.7)	(30.4)	(31.3)	(24.1)
1979	2,696	3,134	2,642	5,070	18,579
	(20.4)	(20.1)	(33.3)	(31.2)	(26.3)
1980	3,600	5,380	3,046	5,723	21,850
	(22.8)	(31.0)	(35.1)	(34.0)	(27.2)
1981	3,191	5,150	2,879	3,976	21,522
	(21.4)	(25.0)	(33.0)	(30.2)	(26.9)
1982[2]	3,262	5,430	2,400	3,443	17,400
	(20.7)	(29.7)	(27.3)	(30.7)	(22.7)

Appendix table 11 (continued)

	Czechoslovakia	G.D.R.	Hungary	Poland	Eastern Europe
			Million dollars and (percent of totals)		
Imports					
1965	523	638	378	583	2,743
	(19.6)	(22.7)	(24.9)	(24.9)	(23.7)
1970	916	1,295	673	938	4,948
	(24.8)	(26.7)	(26.9)	(26.0)	(26.8)
1975	2,098	3,281	1,917	6,199	17,044
	(24.7)	(29.0)	(34.4)	(49.4)	(35.0)
1976	2,347	—	2,084	6,798	—
	(25.0)	—	(37.4)	(49.0)	—
1977	2,501	3,973	2,471	6,575	19,100
	(23.6)	(27.4)	(38.2)	(43.6)	(31.9)
1978	2,674	3,708	3,042	6,452	20,527
	(23.5)	(25.4)	(38.5)	(40.1)	(28.8)
1979	3,483	4,994	3,322	6,541	21,292
	(24.4)	(30.5)	(38.3)	(37.2)	(28.1)
1980	3,809	5,750	3,712	6,472	25,080
	(24.8)	(30.1)	(40.2)	(34.3)	(29.4)
1981	3,306	6,402	3,916	4,566	24,299
	(22.6)	(31.7)	(42.9)	(30.0)	(29.4)
1982[2]	3,545	—	3,060	3,250	21,702
	(22.9)	—	(34.7)	(31.7)	(27.9)

[1] Data not available
[2] Preliminary.

Source: United Nations Conference on Trade and Development, *Trade Relations Among Countries Having Different Economic and Social Systems and All Trade Flows Resulting Therefrom,* TD/B/754, Geneva, Switzerland, August 30, 1979, Annex pp. 1-4, TD/B/808 Add. 1, July 28, 1980, pp. 5-8, and TD/B/859 Add. 1, July 9, 1981, pp. 4-5.

Appendix table 12—Selected Eastern European countries' trade with socialist countries

	Czechoslovakia	G.D.R.	Hungary	Poland	Eastern Europe
		Million dollars and (percent of totals)			
Exports					
1965	1,862	2,211	1,023	1,349	7,801
	(69.3)	(72.0)	(67.7)	(60.6)	(60.1)
1970	2,499	3,238	1,482	2,198	11,969
	(66.0)	(70.7)	(64.0)	(61.9)	(66.2)
1975	5,242	7,055	2,244	5,926	26,330
	(67.1)	(70.0)	(53.5)	57.6)	(62.1)
1976	6,199	[1]—	2,827	6,357	—
	(70.1)	—	(57.0)	(57.7)	—
1977	6,757	8,505	3,306	7,113	33,651
	(69.3)	(70.0)	(57.2)	(57.9)	(63.3)
1978	7,420	9,459	3,531	8,256	38,147
	(69.7)	(71.3)	(55.6)	(58.5)	(63.6)
1979	8,971	10,619	4,256	9,514	43,478
	(68.0)	(70.5)	(53.6)	(58.6)	(61.6)
1980	9,852	11,453	4,477	9,015	46,812
	(62.5)	(66.2)	(51.6)	(53.7)	(58.3)
1981	9,794	—	4,723	7,459	46,999
	(65.9)	—	(54.2)	(56.6)	(58.7)
1982[2]	10,582	—	—	6,052	47,031
	(67.3)	—	—	(54.0)	(61.5)

Appendix table 12 (continued)

	Czechoslovakia	G.D.R.	Hungary	Poland	Eastern Europe
			Million dollars and (percent of totals)		
Imports					
1965	1,849	1,942	994	1,480	7,745
	(69.1)	(69.1)	(65.4)	(63.2)	(66.8)
1970	2,401	3,261	1,586	2,409	10,585
	(65.0)	(67.3)	(63.3)	(66.8)	(57.4)
1975	5,578	7,220	3,040	5,544	27,339
	(65.7)	(64.0)	(54.6)	(44.2)	(56.2)
1976	6,207	—	2,857	6,285	—
	(66.2)	—	(51.3)	(45.3)	—
1977	7,085	9,352	3,245	7,385	35,131
	(66.9)	(64.5)	(50.1)	(48.9)	(58.6)
1978	7,836	9,720	4,014	8,430	39,855
	(68.7)	(66.7)	(50.8)	(52.4)	(59.8)
1979	9,626	10,117	4,413	9,196	43,873
	(67.6)	(62.4)	(50.9)	(52.3)	(57.9)
1980	10,143	11,548	4,414	10,172	48,554
	(66.1)	(60.0)	(47.8)	(53.9)	(56.4)
1981	9,968	12,977	4,356	9,511	50,213
	(68.1)	(64.3)	(47.7)	(62.5)	(60.8)
1982[2]	10,951	—	—	6,249	48,375
	(70.1)	—	—	(61.0)	(62.3)

[1] Data not available
[2] Preliminary.

Source: United Nations Conference on Trade and Development, *Trade Relations Among Countries Having Different Economic and Social Systems and All Trade Flows Resulting Therefrom*, TD/B/754, Geneva, Switzerland, August 30, 1979, Annex pp. 1-4, TD/B/808 Add. 1, July 9, 1981, pp. 4-5.

Appendix table 13—U.S. total trade with selected Eastern European countries, 1960-82

	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982
Czechoslovakia											
Imports from	11.9	16.0	23.3	32.2	34.8	36.6	58.0	50.9	65.9	67.2	61.5
Exports to	4.4	27.6	21.9	102.6	255.1	137.5	106.9	295.5	236.1	97.2	111.7
Balance	– 7.5	11.6	– 1.4	70.4	220.3	100.9	48.9	244.6	170.2	30.0	50.2
G.D.R.											
Imports from	3.0	6.5	8.6	10.0	13.4	16.8	35.1	36.4	43.4	44.7	51.8
Exports to	3.9	12.6	32.5	350.5	419.6	244.8	219.0	388.0	558.8	344.4	236.6
Balance	0.9	6.1	23.9	340.5	406.2	228.0	183.9	351.6	515.4	299.7	184.8
Hungary											
Imports from	1.7	2.1	6.2	35.0	47.6	46.6	68.5	112.2	107.5	127.9	133.2
Exports to	1.6	9.3	28.1	76.2	63.1	95.4	97.7	80.9	89.2	77.5	67.8
Balance	– 0.1	7.2	21.9	41.2	15.5	48.8	29.2	– 31.3	– 19.3	– 50.4	– 65.4
Poland											
Imports from	38.7	65.5	97.6	241.3	314.4	328.5	438.3	425.6	418.4	365.1	212.9
Exports to	143.1	35.2	69.9	599.1	633.6	433.0	689.1	811.0	764.6	684.1	294.1
Balance	104.4	– 30.3	– 27.7	357.8	319.2	114.5	250.8	378.7	343.0	324.2	81.2
Eastern Europe											
Imports from	97.6	156.2	243.9	707.3	1,004.6	1,015.6	1,360.2	1,377.9	1,418.6	1,630.2	1,179.5
Exports to	239.8	246.3	401.0	1,682.8	1,963.4	1,560.9	2,028.3	2,908.2	3,333.5	2,673.4	1,594.7
Balance	141.4	90.2	157.1	975.5	958.8	545.3	668.1	1,530.2	1,914.9	1,043.2	415.2

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe*, various issues.

Appendix table 14—U.S. agricultural trade with selected Eastern European countries, 1960-82

	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982
Czechoslovakia											
Imports from	1,744	1,630	2,801	1,877	3,964	5,430	6,144	7,726	10,400	12,100	13,500
Exports to	655	23,532	14,201	84,735	230,109	113,860	97,155	272,338	205,500	73,000	90,200
Balance	– 1,089	21,902	10,400	82,858	226,145	108,430	91,011	264,612	195,100	60,900	76,600
G.D.R.											
Imports from	9	171	146	572	903	1,687	2,850	2,248	2,800	1,000	2,400
Exports to	1,010	10,897	21,716	343,728	412,945	240,085	181,853	370,600	534,300	333,000	217,800
Balance	1,001	10,726	21,570	343,156	412,042	238,398	179,003	368,400	531,500	332,000	215,400
Hungary											
Imports from	801	434	3,308	13,673	22,567	23,483	32,276	35,764	30,600	33,700	33,100
Exports to	462	7,958	20,636	40,463	22,442	49,043	52,098	27,525	33,600	12,900	7,100
Balance	– 339	7,524	17,328	26,790	– 125	25,560	19,822	– 8,239	3,000	– 20,800	– 26,000
Poland											
Imports from	31,753	37,773	54,143	118,515	144,218	125,377	154,570	164,000	155,700	109,100	69,300
Exports to	135,092	26,251	50,871	384,566	491,448	299,139	511,967	669,400	622,400	596,400	181,800
Balance	103,339	– 11,522	– 3,272	266,051	347,230	173,762	357,397	505,400	466,700	487,300	112,500
Eastern Europe											
Imports from	44,902	64,128	89,856	213,302	275,463	285,620	365,636	352,900	311,000	277,000	227,700
Exports to	171,550	183,584	194,359	1,025,230	1,399,799	894,051	1,156,133	2,051,700	2,318,700	1,781,000	878,600
Balance	126,648	119,456	104,503	811,928	1,124,336	608,431	790,497	1,698,800	2,007,700	1,504,000	648,900

Source: U.S. Department of Agriculture, Economic Research Service, *Agricultural Situation, Eastern Europe*, various issues.

Appendix table 15—Share of agricultural products in U.S. Eastern European trade, selected countries, 1960-82

	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982
					Percent						
U.S. Exports to:											
Czechoslovakia	14.9	85.1	60.3	80.6	90.2	82.8	75.4	92.1	87.0	75.1	80.8
G.D.R.	25.6	86.5	66.8	98.1	98.4	98.1	92.6	95.1	95.5	96.7	92.1
Hungary	31.3	84.9	73.3	51.7	35.5	51.4	53.9	34.0	37.7	16.8	10.5
Poland	94.4	74.7	72.8	63.0	77.6	87.5	74.8	82.8	81.4	87.2	81.8
Eastern Europe	71.6	74.5	48.5	81.0	71.3	57.3	57.8	69.8	89.4	66.5	55.0
U.S. Imports from:											
Czechoslovakia	14.7	10.2	12.0	5.8	11.4	14.8	10.5	15.1	15.8	18.0	22.0
G.D.R.	[1]—	2.6	1.7	5.7	6.7	10.1	8.0	6.0	6.5	1.9	4.6
Hungary	47.1	20.7	53.4	39.1	47.4	50.4	47.2	31.9	28.5	26.2	24.8
Poland	81.9	57.7	55.4	49.1	45.9	38.2	35.3	38.5	37.2	29.9	32.8
Eastern Europe	48.0	41.1	36.9	30.2	27.4	28.1	26.9	25.8	21.9	16.9	19.3

[1] Less than 0.05 percent.

Source: Appendix tables 13 and 14.

Appendix table 16—U.S. wheat exports to selected Eastern European countries, 1960-82

Country	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982
					1,000 tons						
Czechoslovakia	[1]—	—	—	9	143	—	—	442	239	—	—
G.D.R.	—	45	6	335	719	84	219	196	252	174	108
Hungary	—	—	5	—	—	—	—	—	—	—	—
Poland	1,253	9	—	502	698	637	584	817	349	92	—
Eastern Europe	1,356	1,147	168	932	1,987	892	803	1,942	2,224	466	334
					1,000 dollars						
Czechoslovakia	—	—	—	1,576	21,400	30	—	78,690	44,600	—	—
G.D.R.	—	2,610	347	58,074	106,275	9,540	28,130	35,260	49,500	34,200	16,600
Hungary	—	—	269	—	—	—	—	—	—	—	—
Poland	79,830	559	377	80,296	101,640	59,170	68,040	120,200	66,200	17,000	—
Eastern Europe	80,486	68,309	10,180	151,739	277,768	84,170	96,170	315,600	393,100	79,400	50,100

[1] Less than 500 tons.

Source: U.S. Department of Agriculture, Economic Research Service, *Foreign Agricultural Trade of the United States*, various issues.

Appendix table 17—U.S. feed grain exports to selected Eastern European countries, 1960-82

Country	1960	1965	1970	1971	1972	1973	1974	1975	1976	1977
					1,000 tons					
Czechoslovakia	[1]—	374	27	259	98	46	5	—	796	81
G.D.R.	—	64	389	403	556	742	1,164	1,626	2,158	1,248
Hungary	—	—	1	—	—	24	—	—	—	122
Poland	499	—	101	459	306	908	697	1,471	2,101	1,496
Eastern Europe	502	461	1,082	1,469	1,563	1,908	2,494	3,746	5,513	3,182
					1,000 dollars					
Czechoslovakia	—	18,041	1,564	15,840	4,962	3,066	672	39	91,450	8,870
G.D.R.	—	3,400	23,080	22,688	30,500	68,188	149,918	229,950	253,253	125,040
Hungary	9	11	69	—	—	2,498	—	—	—	12,940
Poland	24,150	—	5,450	26,008	16,331	71,959	86,651	185,606	252,237	142,420
Eastern Europe	24,792	22,582	39,875	83,969	83,951	155,621	325,097	499,960	650,972	310,300

[1] Less than 500 tons.

Source: U.S. Department of Agriculture, Economic Research Service, *Foreign Agricultural Trade of the United States*, various issues.

Appendix table 18—U.S. oilseed exports to selected Eastern European countries, 1960-82

Country	1960	1965	1970	1975	1976	1977[1]	1978[1]	1979[1]	1980[1]	1981[1]	1982[1]
					1,000 tons						
Czechoslovakia	[2]—	33	8	62	1	3	20	3	1	—	13
G.D.R.	—	5	—	—	20	12	6	3	2	1	—
Hungary	—	36	34	—	—	—	—	—	—	—	—
Poland	3	26	96	120	56	—	151	200	263	87	100
Eastern Europe	3	100	138	198	327	249	607	741	732	506	546
					1,000 dollars						
Czechoslovakia	—	3,425	1,609	18,039	9,410	6,920	5,000	431	400	—	3,100
G.D.R.	—	560	920	—	840	3,090	1,460	1,080	400	200	—
Hungary	—	3,550	3,966	27	—	—	—	—	—	—	—
Poland	375	2,971	10,544	35,082	12,581	—	39,830	54,860	72,300	25,300	22,400
Eastern Europe	440	10,506	17,139	58,362	67,424	72,420	149,400	208,830	195,300	137,500	131,100

[1] Soybeans only from 1977-82.
[2] Less than 500 tons.

Source: U.S. Department of Agriculture, Economic Research Service, *Foreign Agricultural Trade of the Unted States*, various issues.

1978	1979	1980	1981	1982
398	810	735	412	435
926	1,702	2,868	1,622	1,396
107	1	1	1	1
2,099	2,484	2,566	2,248	437
4,352	7,048	8,183	6,785	3,166
44,600	98,420	98,300	52,200	57,300
94,120	222,010	406,200	237,500	159,600
11,860	670	800	800	—
210,820	291,400	340,300	342,900	45,300
446,590	851,510	1,107,000	1,006,600	368,900

Appendix table 19—U.S. oilcake and oilmeal exports to selected Eastern European countries, 1960-82

Country	1960	1965	1970	1975	1976	1977[1]	1978[1]	1979[1]	1980[1]	1981[1]	1982[1]
					1,000 tons						
Czechoslovakia	[2]—	1	44	305	475	341	130	243	218	36	85
G.D.R.	—	—	5	298	278	414	261	458	362	208	172
Hungary	—	32	164	196	105	94	147	67	95	—	—
Poland	8	30	101	228	431	178	518	366	324	288	7
Eastern Europe	10	150	555	1,392	1,459	1,183	1,263	1,589	1,711	1,258	524
					1,000 dollars						
Czechoslovakia	—	74	5,665	50,824	81,131	72,950	25,800	57,160	46,300	8,300	18,800
G.D.R.	—	—	5,155	51,964	41,795	96,360	54,830	109,900	75,700	58,400	39,000
Hungary	—	2,777	15,107	34,090	20,610	23,500	32,360	16,360	27,200	—	—
Poland	548	2,808	9,179	65,632	80,842	41,260	108,550	81,640	75,100	77,000	1,400
Eastern Europe	655	12,458	58,581	211,085	259,649	266,306	264,240	372,830	396,700	331,300	118,500

[1] Soybeans since 1977.
[2] Less than 500 tons.

Source: U.S. Department of Agriculture, Economic Research Service, *Foreign Agricultural Trade of the Unted States,* various issues.

Appendix table 20—U.S. cattle hides exports to selected Eastern European countries, 1960-82

Country	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982
					1,000 pieces						
Czechoslovakia	25	222	499	877	678	680	586	685	315	334	415
G.D.R.	[1]—	—	4	15	9	43	39	33	43	—	—
Hungary	14	97	37	158	270	227	180	144	94	112	102
Poland	85	227	152	788	389	433	349	513	522	203	791
Eastern Europe	204	901	1,593	3,200	3,298	3,358	3,579	3,474	2,462	1,559	2,545
					1,000 dollars						
Czechoslovakia	140	1,592	4,020	8,034	11,116	13,050	14,000	29,230	8,400	8,500	10,100
G.D.R.	—	—	125	195	159	660	750	1,110	800	—	—
Hungary	94	706	198	1,432	3,486	4,350	4,070	5,380	2,200	3,000	2,300
Poland	862	1,722	1,321	7,425	6,292	9.110	8,320	19,570	19,500	5,500	21,900
Eastern Europe	1,792	6,473	13,761	28,602	53,396	65,340	84,060	131,960	76,200	46,700	71,400

[1] Less than 500 tons.

Source: U.S. Department of Agriculture, Economic Research Service, *Foreign Agricultural Trade of the United States,* various issues.

Appendix table 21—U.S. processed meat imports from selected Eastern European countries, 1960-82

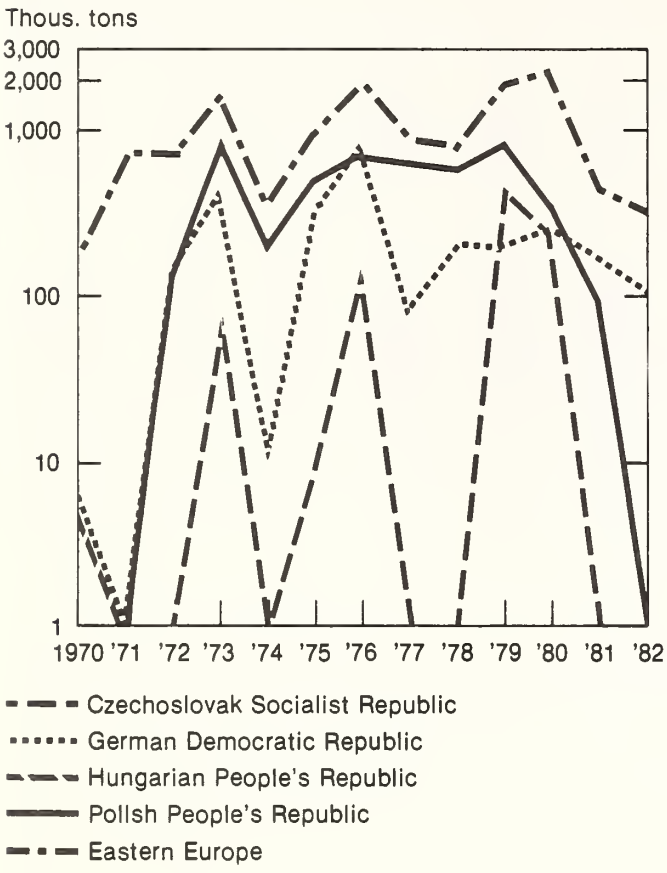
Country	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981	1982
					1,000 tons						
Czechoslovakia	0.5	0.9	1.2	0.2	0.6	0.7	1.2	1.5	1.6	1.6	1.6
G.D.R.	[1]—	—	—	—	—	—	—	—	—	—	—
Hungary	—	—	1.6	4.6	6.7	7.0	8.2	8.2	7.8	7.4	6.8
Poland	15.9	24.3	24.9	38.3	38.1	34.1	39.0	43.3	42.5	26.1	15.9
Eastern Europe	16.5	31.1	33.0	59.0	64.8	63.4	75.6	76.6	67.6	51.4	39.4
					1,000 dollars						
Czechoslovakia	677	1,078	1,860	443	1,960	2,112	3,790	4,420	4,500	4,720	5,170
G.D.R.	—	—	—	40	106	100	200	60	60	30	—
Hungary	—	—	2,568	12,475	19,798	20,013	27,250	25,840	25,650	25,350	23,960
Poland	27,876	33,038	47,103	105,965	126,993	107,704	136,040	147,020	138,910	90,040	58,230
Eastern Europe	28,763	41,642	61,012	163,307	206,197	192,423	255,070	252,100	217,470	171,080	137,500

[1] Less than 500 tons.

Source: U.S. Department of Agriculture, Economic Research Service, *Foreign Agricultural Trade of the United States*, various issues.

Appendix Figure 1

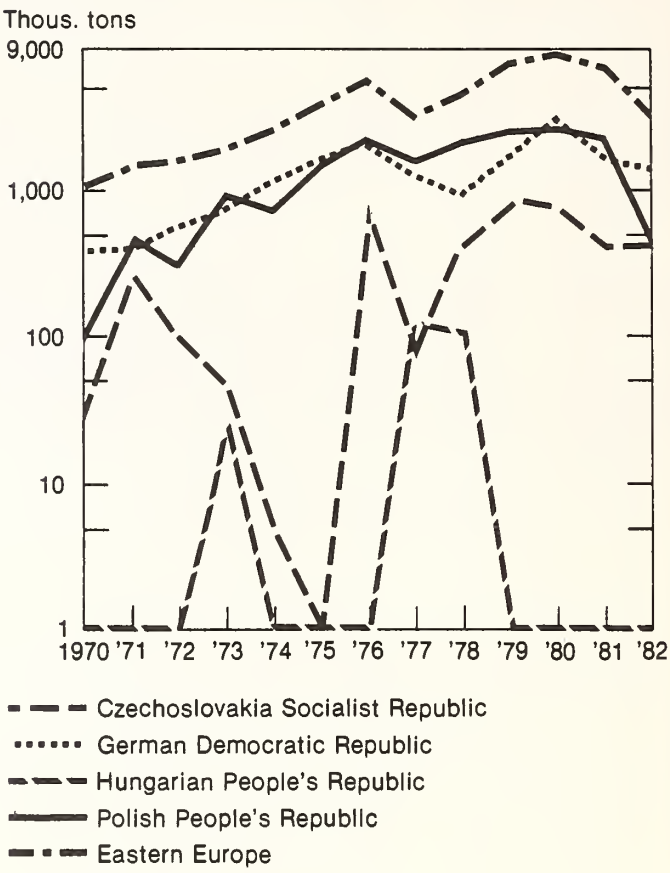
U.S. Wheat Exports to Selected Eastern European countries



Source: Appendix Table 16.

Appendix Figure 2

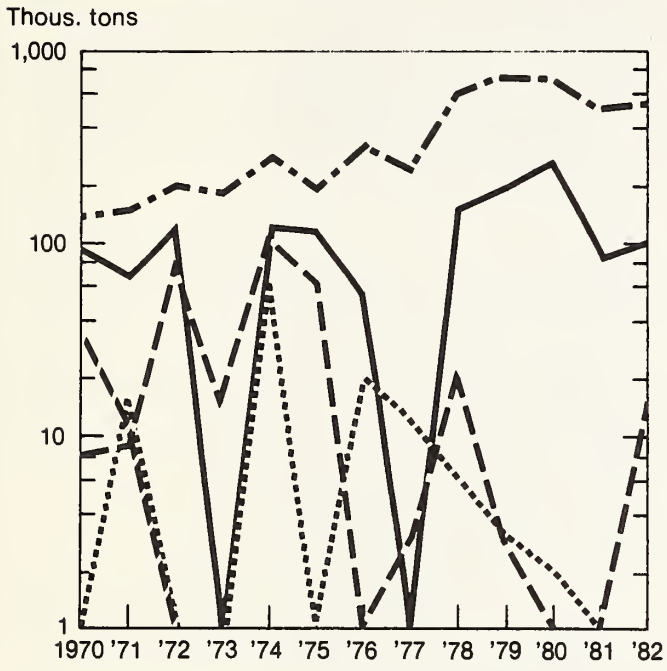
U.S. Feedgrain Exports to Selected Eastern European Countries



Source: Appendix Table 17.

Appendix Figure 3

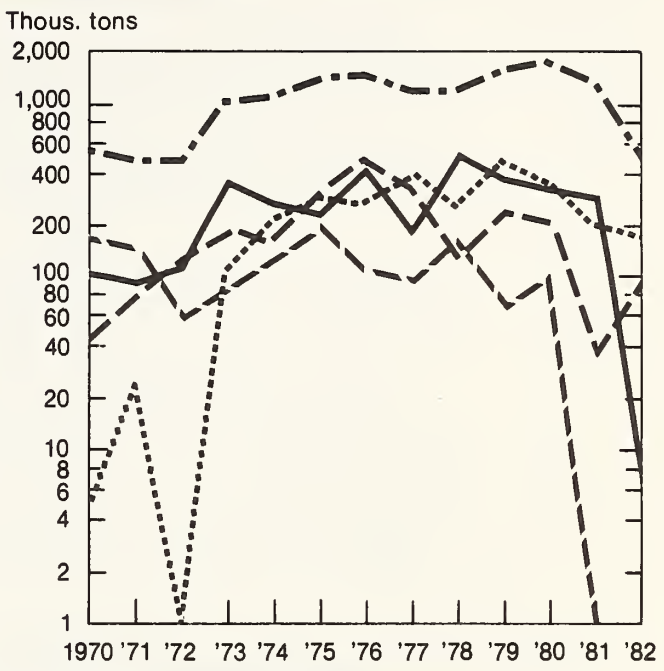
U.S. Oilseed Exports to Selected Eastern European Countries



Source: Appendix Table 18.

Appendix Figure 4

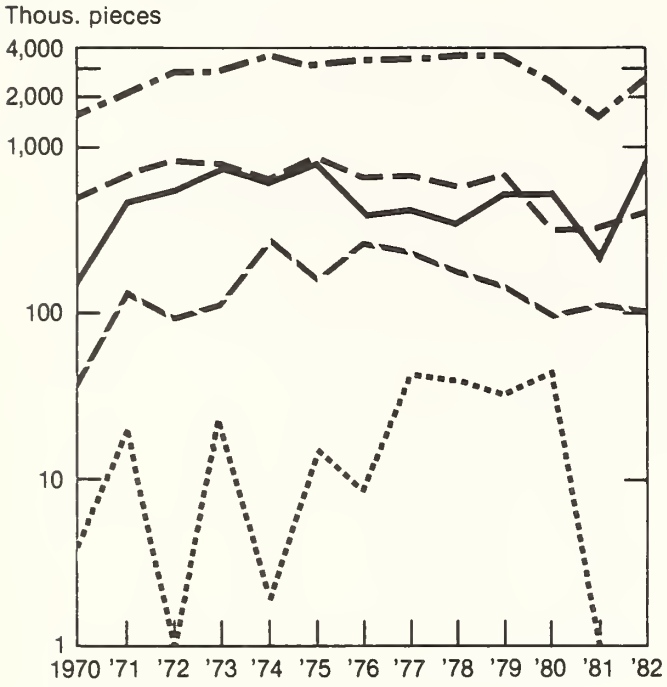
U.S. Oilcake and Meal Exports to Selected Eastern European Countries



Source: Appendix Table 19.

Appendix Figure 5

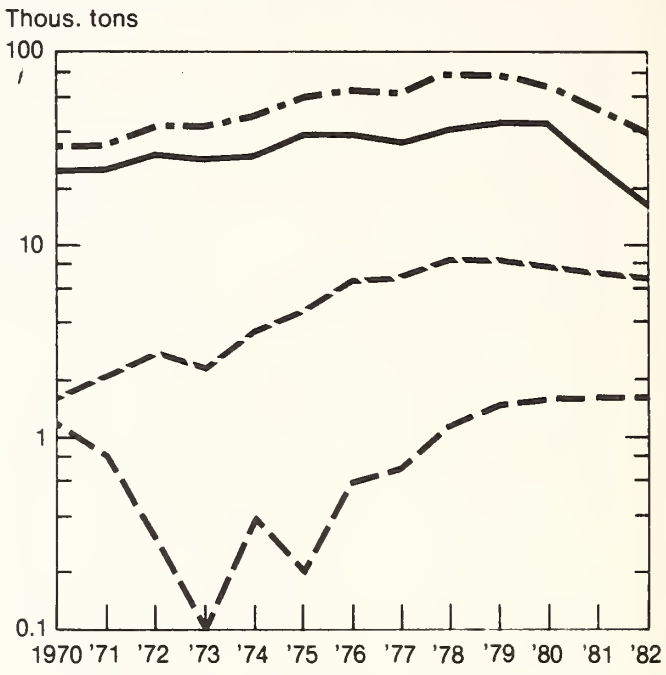
U.S. Cattle Hides Exports to Selected Eastern European Countries



Source: Appendix Table 20.

Appendix Figure 6

U.S. Processed Meat Imports from Selected Eastern European Countries



Source: Appendix Table 21.

U.S. Department of Agriculture
Agricultural Cooperative Service

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

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